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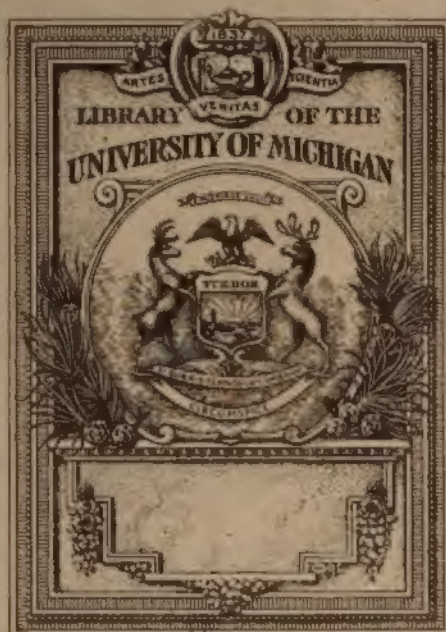
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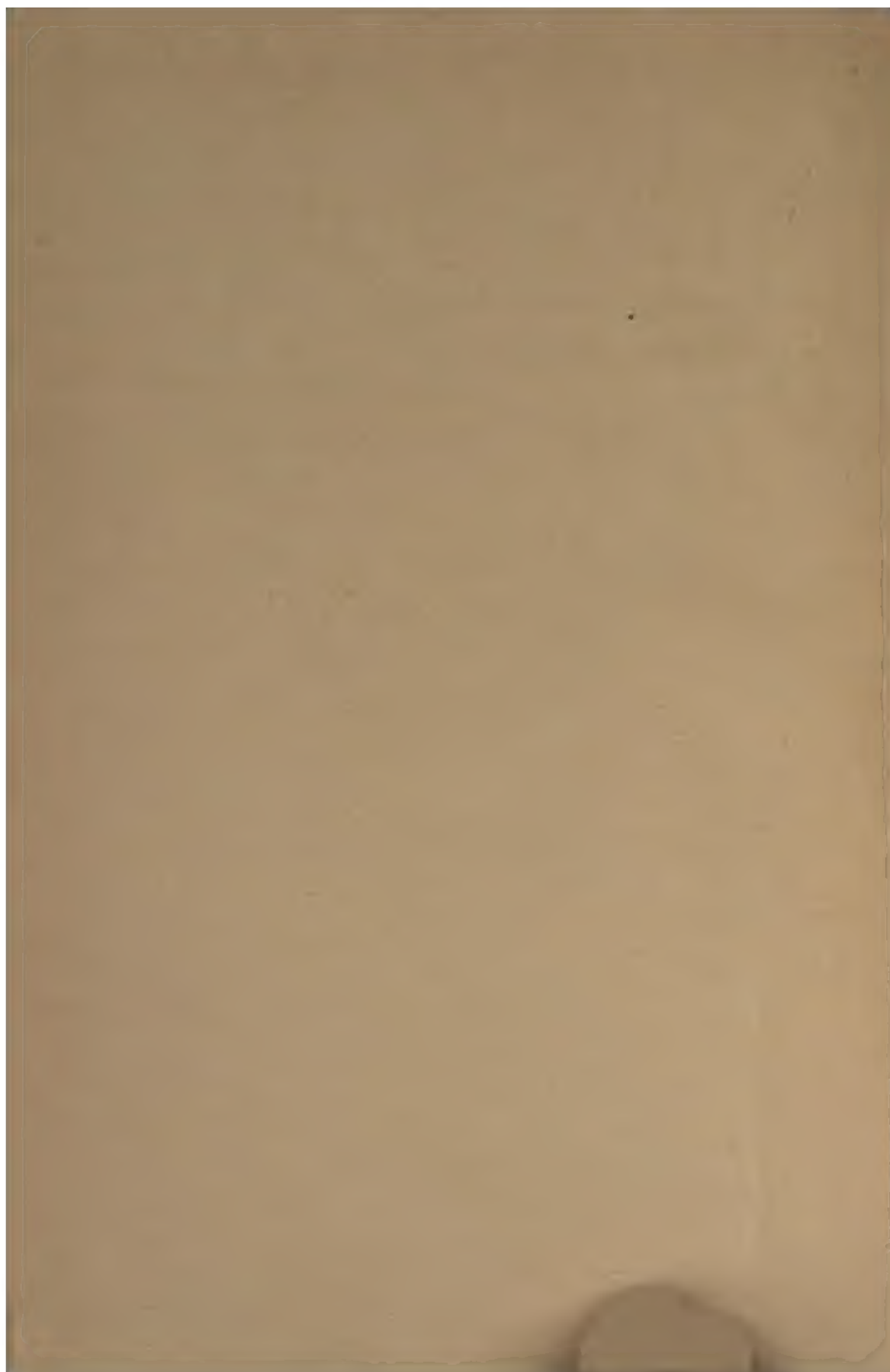
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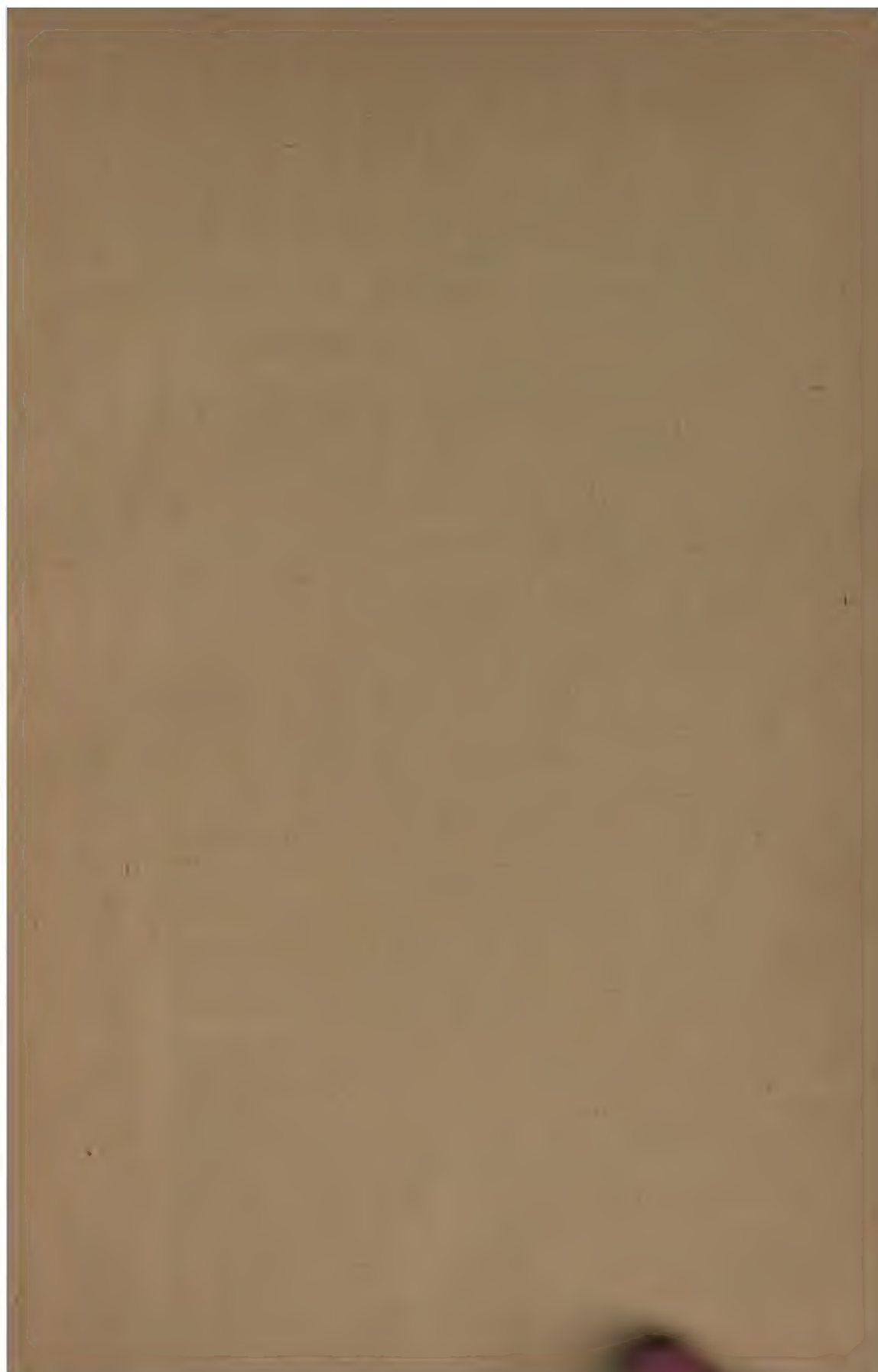
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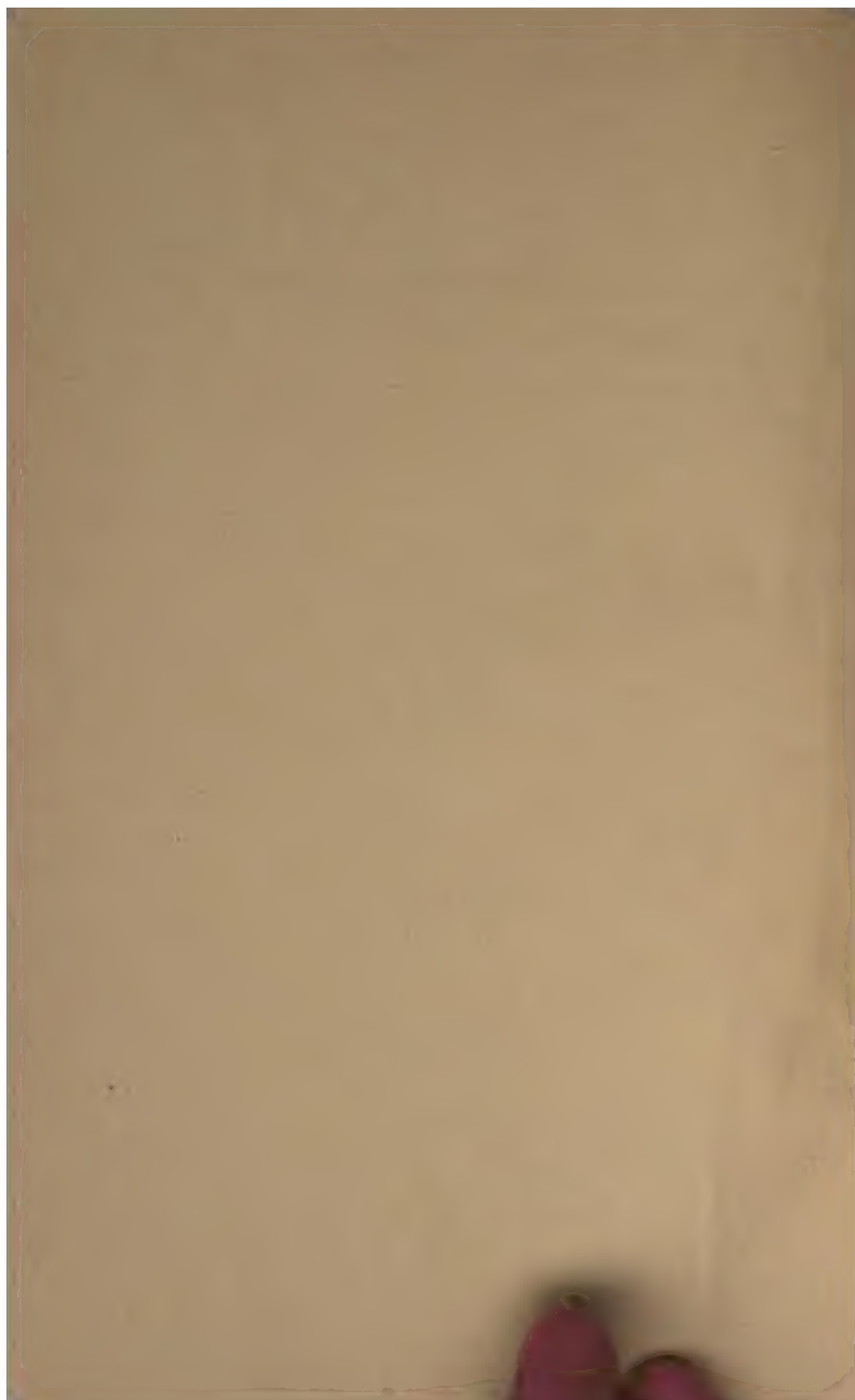
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**DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS**

S. W. STRATTON, Director

RECOMMENDED FOR PUBLICATION

FIRST CONFERENCE



ON

**THE WEIGHTS AND MEASURES OF
THE UNITED STATES**

**HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C.
JANUARY 16 AND 17, 1905**



**WASHINGTON
GOVERNMENT PRINTING OFFICE
1907**

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DEPARTMENT OF COMMERCE
BUREAU OF STANDARDS

FIRST CONFERENCE

OF

THE WEIGHTS AND MEASURES OF
THE UNITED STATES

Held at the Bureau of Standards,
Washington, D. C.,
January 10 and 11, 1907



WASHINGTON:
GOVERNMENT PRINTING OFFICE
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LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF STANDARDS,
Washington, February 1, 1907.

SIR: The first edition of the report of the Conference on the Weights and Measures of the United States, held at the Bureau of Standards on January 16 and 17, 1905, is practically exhausted, and as the information contained therein is of considerable value I have the honor to submit the report for the publication of another edition.

The object of calling the Conference is stated in a letter sent to the governor of each State, which is given below:

FEBRUARY 13, 1904.

DEAR SIR: In order to bring about uniformity in the State laws referring to weights and measures, and also to effect a close cooperation between the State inspection services and the National Bureau of Standards, it is proposed that a meeting of the State sealers of weights and measures (or custodian of the State standards, if there be no sealer) be held in Washington the coming spring. It is our opinion that such a meeting would afford an opportunity for exchange of views and for the discussion of the questions involved, and would lead to a better solution than could be obtained in any other manner.

In case it is finally decided to hold such a conference, would your State send a representative; and if so, would April 15 be agreeable to him?

The replies to the above letter brought out the fact that the date proposed allowed too brief an interval for many of the States to make the necessary arrangements to send representatives, and January 16 and 17, 1905, were therefore selected.

The material for the second edition of the report of this Conference is practically the same as the original report, with a few slight additions.

Respectfully,

S. W. STRATTON,
Director.

The SECRETARY OF COMMERCE AND LABOR.

LIST OF DELEGATES WHO ATTENDED THE CONFERENCE.

ISAAC B. BROWN,
Secretary of Internal Affairs and ex officio
State Officer of Weights and Measures,
Harrisburg, Pa.

W. H. FOWLER,
Deputy State Treasurer,
Lansing, Mich.

W. C. HASKELL,
District Sealer of Weights and Measures,
Washington, D. C.

D. LINN GOOCH,
Member of Congress from Kentucky.

SAMUEL T. MORRILL,
Concord, N. H.

S. W. STRATTON,
Director Bureau of Standards,
Washington, D. C.

LOUIS A. FISCHER,
Chief of Weights and Measures Division,
Bureau of Standards,
Washington, D. C.

PERLEY F. HAZEN,
St. Johnsbury, Vt.

DANIEL C. V. PALMER,
Deputy State Sealer of Weights and
Measures,
Boston, Mass.

JOHN W. RICHARDSON,
Register of the Land Office and ex officio Su-
perintendent of Weights and Measures,
Richmond, Va.

LAENAS G. WELD,
Professor of Mathematics, Iowa State
University,
Iowa City, Iowa.

PROCEEDINGS
OF THE
FIRST ANNUAL MEETING OF THE SEALERS OF WEIGHTS AND MEASURES
OF THE UNITED STATES,

HELD AT THE BUREAU OF STANDARDS, WASHINGTON, D. C.,
JANUARY 16 AND 17, 1905.

JANUARY 16, 1905.

MORNING SESSION.

The meeting was called to order by Dr. S. W. STRATTON, Director of the Bureau of Standards, who addressed the meeting as follows:

The relation between questions pertaining to standards and those arising in connection with the regulation and inspection of the weights and measures used in commerce and trade is so important that cooperation between the officials having these matters in charge is absolutely essential in order to secure uniform and efficient results. It was for this purpose that the various State custodians, inspectors, and sealers of weights and measures were invited to meet with the officials of the National Bureau of Standards, and as the representative of that institution it gives me great pleasure to welcome you to this conference, which can not fail to be productive of the utmost good, and I hope that one of the results of the meeting will be a permanent organization of the officials throughout the country intrusted with the administration of the laws pertaining to weights and measures.

In order to facilitate discussion and bring the subject clearly and concisely before you, the Bureau has compiled the laws concerning the weights and measures of the various States. A mere glance at this volume, which is before you, will show that the different States have enacted laws without regard to each other. In many cases adjacent States have laws just different enough to encourage fraud on

the part of those dealing with the public. Furthermore, in many States the laws are not enforced, and I fear that this is true in a large majority of them. However, the country is now awakening to the necessity for uniform laws pertaining to weights and measures.

The Bureau of Standards is the successor of the Office of Weights and Measures, which formerly existed in the United States Coast and Geodetic Survey. One of the largest and most important branches of the Bureau's work is the section of weights and measures. This section has charge of the fundamental standards of length, mass, and volume, and compares with these standards the working standards of States, educational and scientific institutions, manufacturers, and others, but has no control over local laws and regulations pertaining to the inspection or use of commercial weights and measures. Nevertheless local authorities are continually coming to us for advice in such matters, and consequently the Bureau has made a study of the subject, both in this country and abroad, has devised apparatus for the use of local officials, and has placed these designs in the hands of manufacturers. A collection of the balances, weights, and measures used by the local inspectors in foreign countries has been made and may be seen in the rooms of the section of weights and measures.

In 1836 a law was enacted by Congress which directed that each State in the Union should be provided with a complete set of standards. In accordance with this act most of the States have been supplied with a set of standard weights and measures, but in only a few instances has any use been made of them. In most cases they are in the custody of some official whose other duties are so onerous that little or no time can be given to the inspection of the commercial weights and measures in use. In consequence of this condition the Bureau is called upon to make tests of ordinary weights and measures which should be tested by local authorities.

Delegates and their friends are invited to visit the laboratories of the Bureau. The sections devoted to thermometry, electricity, light, and engineering, instruments will be found equally interesting, although perhaps not so closely related to the subject under discussion.

Mr. L. A. FISCHER, in charge of the Section of Weights and Measures of the Bureau of Standards, then read a paper on the "History of United States weights and measures," which follows:

MR. CHAIRMAN AND GENTLEMEN: The subject of weights and measures is one of such great interest and importance and is attracting so much attention in this country and in England at the present time that a short account of the steps taken to secure uniformity in

the United States is deemed an appropriate subject to bring to the attention of this convention.

The attention of the United States Government has long been directed toward securing uniformity in this country, and in the effort to secure international agreement in weights and measures it has always shown the greatest interest. The history of the original Confederation of States and of the constitutional government of the United States is full of evidences of the perplexities arising from the diversity of weights and measures throughout their jurisdiction and of the desirability of a uniform system.

The weights and measures in common use in this country at the time of the American Revolution were all of English origin and were in use in England at that period. The principal units were the yard, the avoirdupois pound, the gallon, and the bushel. More or less authentic copies of the English standards of the denominations mentioned had been brought over from time to time and adopted by the different colonies. Divergencies in these weights and measures were, however, quite common, due no doubt to the fact that the system of weights and measures of England was not itself well established, and hence the copies brought to this country were often adjusted to different standards.

That this condition was recognized very early is made evident by the Articles of Confederation, which contained the following clause: "The United States in Congress assembled shall also have the sole and exclusive right and power of regulating the alloy and value of coin struck by their own authority, or by that of the respective States—fixing the standard of weights and measures throughout the United States." This power was transferred to Congress by the Constitution of the United States in Article I, section 8, the language being as follows: "The Congress shall have Power * * * To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;".

While Congress was not slow to take action in regard to coinage, it seems not to have been inclined to come to a decision in regard to weights and measures, though apparently willing enough to consider the subject. Washington, in his first annual message to Congress, January, 1790, stated that "uniformity in the currency, weights, and measures of the United States is an object of great importance, and will, I am persuaded, be duly attended to." In accordance with Washington's suggestion, the matter was referred to a select committee of the House of Representatives with instructions to prepare a bill, and it was also ordered that the matter be referred to the

Secretary of State to prepare and report to the House a proper plan for establishing uniformity in the weights and measures. Jefferson was then Secretary of State, and in response to the above request made a report, in which he proposed two distinct plans. The first was substantially to "define and render uniform and stable the existing system * * * to reduce the dry and liquid measures to corresponding capacities by establishing a single gallon of 270 cubic inches and a bushel of eight gallons, or 2,160 cubic inches * * *." The second plan was "to reduce every branch to the same decimal ratio already established for coin, and thus bring the calculations of the principal affairs of life within the arithmetic of every man who can multiply and divide plain numbers."

No action was taken, however, by the House, and in his second message to Congress, on December 8, 1790, Washington again called the attention of that body to the importance of the subject. A few days later the House ordered that the report of Jefferson, referred to above, be communicated to the Senate. On March 1, 1791, the Senate committee to which the matter had been referred reported that it would not be eligible to make a change in the weights and measures, as a proposition had been made to the French and British Governments to obtain an international standard. This report was accepted and the matter rested there, although Washington, on October 25, 1791, repeated his former recommendations in his third annual message to Congress, in the following language:

A uniformity in the weights and measures of the country is among the important objects submitted to you by the Constitution and if it can be derived from a standard at once invariable and universal, must be no less honorable to the public councils than conducive to the public convenience.

A week later the Senate appointed a committee to take into consideration the subject of weights and measures. The committee reported on the 4th of April, 1792, recommending the adoption of the second plan proposed by Jefferson, which was an entirely decimal system. Again no definite action was taken. The matter was considered in a desultory way by Congress from time to time, but no agreement was reached notwithstanding that the repeated recommendations of Washington were followed by those of Adams. A sufficient explanation for the disinclination of Congress to act in a matter of such admitted importance was the difficulty of agreeing upon a plan.

The Fifth Congress, second session, in 1799, passed an act ordering that the surveyor (of each port of the United States) shall from time to time, and particularly on the first Monday of January and July in

each year, examine and try the weights, measures, and other instruments used in ascertaining the duties on imports with standards to be provided by each collector at the public expense for that purpose; and when disagreements and errors are discovered he shall report the same to the collector and obey and execute such directions as he may receive for the correction thereof agreeably to the standards aforesaid.

This was the first act passed by Congress in regard to weights and measures, but in view of the fact that no standards had ever been adopted the legislation was not put into operation until about thirty-five years after its passage, when certain standards, which will be referred to later, were adopted by the Treasury Department.

After the war of 1812 the question of uniformity in weights and measures was again brought to the attention of Congress, and in 1819 a committee of the House of Representatives proposed to adopt absolute standards conforming to the weights and measures in common use; to obtain through a commission copies of the yard, the bushel, the wine gallon, and the pound supposed to conform to those in common use in the United States; to preserve these standards and to distribute copies of them; to compare the length measure with the length of the second's pendulum and also with that of an arc of the terrestrial meridian; to connect them by determining the weight of a certain bulk of distilled water, and to define the bushel and the gallon by the weight of water which they contain. No further record of the report is found, and it may be assumed that no action upon it was taken. The Senate had, by a resolution adopted March 3, 1817—two years prior to the above report—requested the Secretary of State to prepare and report a "statement" relative to the regulations and standards for weights and measures in the several States and relative to the proceedings in foreign countries for establishing uniformity in weights and measures, together with such propositions relative thereto as might be proper to adopt in the United States.

John Quincy Adams was at that time Secretary of State, and four years later—namely, on February 22, 1821—he submitted an elaborate report to the House of Representatives, in which, among other recommendations, the following are found:

(1) To fix the standard with the partial uniformity of which it is susceptible for the present, excluding all innovations.

(2) To consult with foreign nations for the future and ultimate establishment of universal and permanent uniformity.

As before, Congress took no action, probably because the situation at that time was extremely complicated. Neither the metric system

in France nor the system in common use in England was well established. In France the law making the metric system compulsory had been repealed, and the metric system was in use side by side with the ancient weights and measures, thus producing endless confusion. In England the situation was not much better; the ale gallon of 282 cubic inches and the wine gallon of 231 cubic inches were both in use until 1824, when the new imperial gallon, containing 10 pounds of water, and of a capacity of about 277½ cubic inches, was adopted, together with the bushel of 8 gallons. Neither of these measures was in use in this country, and hence the United States could not at that time adopt either of the systems in use in England or France without introducing radical changes in the weights and measures already in use, nor was there at that time any positive assurance that either the English or metric systems would be permanent.

While Congress had been considering the matter, most of the States had, independently of one another, secured and adopted standards. Most of the standards thus adopted were brought from England; nevertheless, standards of the same denomination differed widely among themselves, thus perpetuating confusion in the commerce between adjacent States.

Though confusion in commercial transactions might be overlooked, uncertainty in regard to the coinage could not be tolerated, and on May 19, 1828, a certain troy pound was adopted as the standard for coinage by Congress in an "Act to continue the Mint at the City of Philadelphia, and for other purposes." The section 2 of the act referred to reads as follows:

And be it further enacted, That, for the purpose of securing a due conformity in weight of the coins of the United States * * * the brass troy pound weight procured by the minister of the United States at London, in the year one thousand eight hundred and twenty-seven, for the use of the Mint, and now in the custody of the Mint at Philadelphia, shall be the standard troy pound of the Mint of the United States, conformably to which the coinage thereof shall be regulated.

The troy pound thus adopted had been procured in the year 1827 by Albert Gallatin, minister of the United States at London, and brought to this country by special messenger, who delivered it to the director of the Mint at Philadelphia. The weight was of brass and an exact copy of the imperial troy pound of Great Britain, according to the statement of Captain Kater, who made the comparison between the two standards. The casket and accompanying packages were retained under seal until Mr. Adams, President of the United States,



visited Philadelphia and verified the seal of Mr. Gallatin and the other facts in regard to its authenticity.

This ceremony took place on October 12, 1827, and the full certificate of President Adams in regard to the seal, which he readily recognized, and to the whole transaction and consequent accuracy of the weight was added to the vouchers in the case. He declared, in conclusion, his belief that the brass weight then exhibited was the identical pound copy of the imperial standard troy pound of Great Britain referred to in the aforesaid certificates. The foregoing facts were communicated to Congress through the Committee on the Mint and resulted in the passage of the act cited above.

While the act of Congress of 1828 only made this pound the standard for coinage, it virtually became the fundamental standard of the United States from which the avoirdupois pound in common use was derived.

On May 29, 1830, two years after the mint pound had been legalized for coinage, the Senate passed a resolution directing the Secretary of the Treasury to cause a comparison of the weights and measures in use at the principal custom-houses to be made, and to report to the Senate at its next session.

Steps were promptly taken by the Treasury Department to comply with the resolution of the Senate, and the preliminary report of F. R. Hassler, Superintendent of the Coast Survey, to whom the investigation had been intrusted, was transmitted to the Senate on March 3, 1831, this being followed by a more complete report in June, 1832.

As was anticipated, large discrepancies were found to exist among the weights and measures in use at the different ports, some being too small and others too large, but the average value of the various denominations agreed fairly well with the weights and measures in use in Great Britain at the time of the American Revolution.

Without waiting for authority from Congress the Treasury Department took immediate steps to correct the evil by having constructed, under the direction of Mr. Hassler, the necessary weights and measures for the customs service. The divergencies among the weights and measures in use in the customs service was directly opposed to the spirit of the Constitution, which requires that all duties, imposts, and excises shall be uniform throughout the United States, and the Secretary of the Treasury felt fully authorized in taking steps to secure uniformity when discrepancies were once known to exist.

Before weights and measures could be constructed, however, it was necessary for the Treasury Department to determine upon certain

units and to adopt material representatives of these units. Those finally adopted were the yard of 36 inches, the avoirdupois pound of 7,000 grains, the gallon of 231 cubic inches, and the bushel of 2,150.42 cubic inches. The standard yard adopted was the 36 inches comprised between the twenty-seventh and the sixty-third inches of a certain 82-inch brass bar, prepared for the Coast Survey by Troughton, of London. This bar had been brought to the United States by Hassler in 1813, and the 36-inch space referred to was supposed to be identical with the English standard at 62° F., though it had never been directly compared with that standard.

It is evident from the reports of Mr. Hassler that he regarded the imperial yard as the real standard of length of the United States and the Troughton scale merely as a copy whose length should be corrected if it was subsequently found to differ from the imperial yard; and this view was taken by those who subsequently had charge of our standards, as will be shown later on.

The avoirdupois pound adopted by Mr. Hassler as the standard for the Treasury Department was derived from the troy pound of the mint according to the equivalent, 1 avoirdupois pound equals $\frac{17}{16}$ pounds troy. This was the accepted relation in this country as well as in England; hence both the troy and avoirdupois pounds adopted were in practical accord with the similar standards of Great Britain.

The units of capacity, namely, the wine gallon of 231 cubic inches and the Winchester bushel of 2,150.42, were adopted, because, as intimated, they represented more closely than any other English standards the average of the capacity measures in use in the United States at the date of Mr. Hassler's investigation. The wine gallon was introduced as a wine measure into England in 1707, during the reign of Queen Anne, but it was abolished in 1824, when the new imperial gallon, containing 10 pounds of water, was made the standard. This last statement applies also to the bushel of 2,150.42 cubic inches. This bushel is the earliest English capacity measure of which we have any record, a copy of it made by order of Henry VII being still in existence. But this bushel had also been abolished in England, it having been superseded by the bushel of 8 gallons. Therefore neither the gallon nor the bushel adopted by the United States Treasury Department was in accord with the legal capacity standards of England, but they differed by about 17 per cent and 3 per cent, respectively, and these differences exist at the present time. Not only did they differ from the new standards in Great Britain, but they also differed from the discarded English standards from which they were derived, for the reason that Mr. Hassler selected the temperature of the maximum

density of water, namely, 39.2° F.,^a as the temperature at which the United States measures were standard, whereas their English prototypes were standard at 62° F.

Such, then, were the fundamental standards adopted upon the recommendation of Mr. Hassler by the United States Treasury Department, and according to which the weights and measures for the customs service were made to conform. The construction of the weights and measures for this purpose was pushed with almost feverish haste, and so well satisfied was Congress with the progress made that the following act was passed and approved June 14, 1836:

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he hereby is, directed to cause a complete set of all weights and measures adopted as standards and now either made or in progress of manufacture for the use of the several custom-houses, and for other purposes, to be delivered to the governor of each State in the Union, or such person as he may appoint for the use of the States, respectively, to the end that a uniform standard of weights and measures may be established throughout the United States.

While the act does not specifically adopt the standards above described, the practical effect of it was to make them the standards for the United States, inasmuch as the weights distributed to the States in accordance with the act were in almost every case adopted by the State legislatures soon after their receipt.

The act of 1836 was supplemented in 1838 by a joint resolution of Congress, which directed the Secretary of the Treasury to furnish balances to the States. By 1838 the weights for the States were reported finished, and during the following year the weights for the custom-houses were completed and delivered.

By 1850 practically all the States admitted to the Union had been supplied with complete sets of weights and measures, and in addition sets were presented to England, France, Japan, and Siam. As new States were admitted they were also supplied with sets of standards, the last set being supplied to North Dakota in 1893.

In order to carry out the provisions of the acts of 1836 and 1838 the Office of Weights and Measures, under the direction of the Superintendent of the Coast Survey, had been established, and all the standards adopted at the beginning of the work, and subsequently, were in charge of this Office, with the exception of the troy pound of the mint, which has always remained at Philadelphia.

^aAccording to the determination made by Mr. Hassler on the expansion of water, 39.83° F. was the temperature of maximum density. See report of Alexander D. Bache, Superintendent of Weights and Measures, 46-47. Ex. Doc. No. 73, 30th Cong., 1st sess.

As a matter of interest to those State officers charged with the custody of the standards thus supplied to the States by the Federal Government, a list of the weights and measures composing a State set is hereto appended.

First. A set of standard weights composed of the following pieces:

One 50 pounds avoirdupois.....	}	Arranged in one box.
One 25 pounds avoirdupois.....		

One 20 pounds avoirdupois.....	}	Arranged in one box.
One 10 pounds avoirdupois.....		
One 5 pounds avoirdupois.....		
One 4 pounds avoirdupois.....		
One 3 pounds avoirdupois.....		
One 2 pounds avoirdupois.....		
One 1 pound avoirdupois.....		
One 1 pound Troy.....		

One 10 ounces Troy	}	Arranged in one box.
One 6 ounces Troy		
One 5 ounces Troy		
One 4 ounces Troy		
One 3 ounces Troy		
One 2 ounces Troy		
One 1 ounce Troy		
One 0.5 ounce Troy		
One 0.4 ounce Troy		
One 0.3 ounce Troy		
One 0.2 ounce Troy		
One 0.1 ounce Troy		
One 0.05 ounce Troy (silver wire)		
One 0.04 ounce Troy (silver wire)		
One 0.03 ounce Troy (silver wire)		
One 0.02 ounce Troy (silver wire)		
One 0.01 ounce Troy (silver wire)		
One 0.005 ounce Troy (silver wire)		
One 0.004 ounce Troy (silver wire)		
One 0.003 ounce Troy (silver wire)		
One 0.002 ounce Troy (silver wire)		
One 0.001 ounce Troy (silver wire)		
One 0.0005 ounce Troy (silver wire)		
One 0.0004 ounce Troy (silver wire)		
One 0.0003 ounce Troy (silver wire)		
One 0.0002 ounce Troy (silver wire)		
One 0.0001 ounce Troy (silver wire)		

One 8 ounces avoirdupois ^a	} Arranged in one box. ,
One 4 ounces avoirdupois.....	
One 2 ounces avoirdupois.....	
One 1 ounce avoirdupois.....	
One 0.5 ounce avoirdupois.....	
One 0.4 ounce avoirdupois.....	
One 0.3 ounce avoirdupois.....	
One 0.2 ounce avoirdupois.....	
One 0.1 ounce avoirdupois.....	
One 0.05 ounce avoirdupois (silver wire) ..	
One 0.04 ounce avoirdupois (silver wire) ..	
One 0.03 ounce avoirdupois (silver wire) ..	
One 0.02 ounce avoirdupois (silver wire) ..	
One 0.01 ounce avoirdupois (silver wire) ..	
One 0.005 ounce avoirdupois (silver wire) ..	
One 0.004 ounce avoirdupois (silver wire) ..	
One 0.003 ounce avoirdupois (silver wire) ..	
One 0.002 ounce avoirdupois (silver wire) ..	
One 0.001 ounce avoirdupois (silver wire) ..	
One 0.0005 ounce avoirdupois (silver wire) ..	
One 0.0004 ounce avoirdupois (silver wire) ..	
One 0.0003 ounce avoirdupois (silver wire) ..	
One 0.0002 ounce avoirdupois (silver wire) ..	
One 0.0001 ounce avoirdupois (silver wire) ..	

Second. A standard brass yard measure, with matrix.

Third. A set of liquid capacity measures, consisting of the following pieces:

One 1 gallon measure, in box.	
One half-gallon measure	} Arranged in one box.
One quart measure	
One pint measure	
One half-pint measure	
Each with ground-glass cover.	

Fourth. A brass standard half bushel, with a ground-glass cover, in case.

^aThe denominations of some of the weights were changed in sets supplied after 1857. Instead of decimal parts of the ounce, weights of the following denominations were furnished: $\frac{1}{2}$ ounce, $\frac{1}{4}$ ounce, $\frac{1}{8}$ ounce, and $\frac{1}{16}$ ounce; 50, 25, 10, 5, 4, 3, 2, 1, 0.05, 0.04, 0.03, 0.02, and 0.01 grains.

In October, 1834, the British imperial yard and troy pound made in 1758, of which the Troughton scale and the mint pound were supposed to be exact copies, were destroyed by the burning of the Houses of Parliament. When the new imperial standards to replace them were completed in 1855 two copies of the yard and one copy of the avoirdupois pound were presented to the United States, arriving in this country in 1856. One of these bars, namely, bronze yard No. 11, was very soon after compared with the Troughton scale, the result showing that the accepted 36 inches of the Troughton scale was 0.00087 inch longer than the British imperial yard. The second bar received from England was subsequently compared with the Troughton scale and fully corroborated the result obtained from the comparison with bronze No. 11. The new yards, and especially bronze No. 11, were far superior to the Troughton scale as standards of length, and consequently they were accepted by the Office of Weights and Measures as the standards of the United States, and all comparisons were afterwards referred to the imperial yard through these two standards. They were twice taken to England and recompared with the imperial yard, once in 1876 and again in 1888.

The avoirdupois pound presented with the two yards was also compared with the United States avoirdupois pound derived from the mint pound, the result showing a very satisfactory agreement. The advent of the new pound did not, therefore, disturb the position of the troy pound of the mint or of the avoirdupois pound derived from the mint pound.

The next and perhaps the most important legislation enacted by Congress was the act of 1866 legalizing the metric system of weights and measures in the United States. The act, which was passed July 28, 1866, reads as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That from and after the passage of this act it shall be lawful throughout the United States of America to employ the weights and measures of the metric system, and no contract or dealing or pleading in any court shall be deemed invalid or liable to objection because the weights or measures expressed or referred to therein are weights or measures of the metric system.

SEC. 2. *And be it further enacted,* That the tables in the schedule hereto annexed shall be recognized in the construction of contracts and in all legal proceedings as establishing in terms of the weights and measures now in use in the United States the equivalents of the weights and measures expressed therein in terms of the metric system; and said tables may be lawfully used for computing, determining, and expressing in customary weights and measures the weights and measures of the metric system.

Measures of length.

Metric denominations and values.		Equivalents in denominations in use.	
Myriameter.....	10,000 meters.	6.2137	miles.
Kilometer.....	1,000 meters.	0.62137	mile, or 3,280 feet and 10 inches.
Hectometer.....	100 meters.	328	feet and 1 inch.
Dekameter.....	10 meters.	393.7	inches.
Meter.....	1 meter.	39.37	inches.
Decimeter.....	$\frac{1}{10}$ of a meter.	3.937	inches.
Centimeter.....	$\frac{1}{100}$ of a meter.	0.3937	inch.
Millimeter.....	$\frac{1}{1000}$ of a meter.	0.0394	inch.

Measures of capacity.

Metric denominations and values.			Equivalents in denominations in use.	
Names.	Number of liters.	Cubic measure.	Dry measure.	Liquid or wine measure.
Kiloliter or stere.....	1,000	1 cubic meter.....	1.358 cubic yards.....	264.17 gallons.
Hectoliter.....	100	$\frac{1}{10}$ of a cubic meter.....	2 bushels and 3.35 pecks.	26.417 gallons.
Dekaliter.....	10	10 cubic decimeters.....	9.08 quarts.....	2.6417 gallons.
Liter.....	1	1 cubic decimeter.....	0.908 quart.....	1.0567 quarts.
Deciliter.....	$\frac{1}{10}$	$\frac{1}{10}$ of a cubic decimeter.....	6.1022 cubic inches.....	0.845 gill.
Centiliter.....	$\frac{1}{100}$	10 cubic centimeters.....	0.6102 cubic inch.....	0.338 fluid ounce.
Milliliter.....	$\frac{1}{1000}$	1 cubic centimeter.....	0.061 cubic inch.....	0.27 fluid dram.

Measures of surface.

Metric denominations and values.		Equivalents in denominations in use.	
Hectare.....	10,000 square meters.	2.471	acres.
Are.....	100 square meters.	119.6	square yards.
Centare.....	1 square meter.	1.550	square inches.

Weights.

Metric denominations and values.			Equivalents in denominations in use.	
Names.	Number of grams.	Weight of what quantity of water at maximum density.	Avoirdupois weight.	
Millier or tonneau.....	1,000,000	1 cubic meter.....	2204.6	pounds.
Quintal.....	100,000	1 hectoliter.....	220.46	pounds.
Myriagram.....	10,000	10 liters.....	22.046	pounds.
Kilogram or kilo.....	1,000	1 liter.....	2.2046	pounds.
Hectogram.....	100	1 deciliter.....	3.5274	ounces.
Dekagram.....	10	10 cubic centimeters.....	0.3527	ounce.
Gram.....	1	1 cubic centimeter.....	15.432	grains.
Decigram.....	$\frac{1}{10}$	$\frac{1}{10}$ of a cubic centimeter.....	1.5432	grains.
Centigram.....	$\frac{1}{100}$	10 cubic millimeters.....	0.1543	gram.
Milligram.....	$\frac{1}{1000}$	1 cubic millimeter.....	0.0154	grain.

While the above resolution was being considered, Congress also considered a bill authorizing the Secretary of the Treasury to furnish the States with metric weights and measures. Strange to say, this bill, which logically should follow, was approved one day before the resolution legalizing the use of the metric system. It was likewise a joint resolution, and read as follows:

Be it resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury be, and he is hereby, authorized and directed to furnish to each State, to be delivered to the governor thereof, one set of standard weights and measures of the metric system for the use of the States, respectively.

The work of making and adjusting these standards fell naturally upon the Office of Weights and Measures, and the first question that had to be considered was that of standards. The practice followed by other countries which had adopted the metric system of accepting the meter and the kilogram of the archives of France as fundamental standards was followed by the United States. The question was mainly one of securing authentic copies of these standards. Fortunately the Office of Weights and Measures had several copies of both standards of more or less authenticity on hand, but without hesitation an iron bar, known as the "committee meter," and a platinum kilogram, known as the "Arago kilogram," were selected.

The committee meter is one of fifteen similar bars, whose lengths were ascertained in the process of constructing the original meter by the French committee of weights and measures in 1799; hence its name, "committee meter."

The committee referred to was composed of members of the National Institute of France and of deputies from foreign countries. Mr. J. G. Tralle, the deputy from the Helvetic Republic, had been placed in charge of the construction of the meters, and when the bars were distributed among the members of the committee he secured two of them, one of which he presented to Mr. Hassler. This bar was therefore of the highest authenticity. As before stated, it is made of iron, with a cross section of 9 by 29 mm., and its length is defined by the end surfaces, which are remarkably plane when one considers the age in which the bars were made. The bar bears the stamp of the committee, namely, a small ellipse, whereof three quadrants are shaded and the fourth one clear, except for the number 10,000,000, which indicates the number of meters in a meridian quadrant of the earth. It also bears the mark \therefore at one end, by which it was distinguished during the comparison with the other meters. In Mr. Hassler's report on the construction of the meters it is stated, on

the authority of Mr. Tralle, that all the meters agreed with the true meter within one-millionth part of the toise.^a

When Mr. Hassler came to the United States in 1805 he brought with him the committee meter, which he soon after presented to the Philosophical Society of Philadelphia, Pa. Shortly after, when he was put in charge of the survey of the coast, the meter was placed at his disposal by the Philosophical Society, and he made it the standard of length for that work, and until 1890 all base measurements of the Survey were referred to this meter.

In view of the foregoing, it was but natural that this bar should be selected as the standard to which the State meters should conform.

The Arago kilogram was procured in 1821 by Mr. Gallatin while minister of the United States to France and was sent to this country, together with a platinum meter. The certificate of Arago, the celebrated physicist, which accompanied these standards, states that the kilogram differs from the original kilogram des Archives by less than 1 mg. The weight is a platinum cylinder with flat bases, the edges being slightly rounded. The height and diameter are nearly equal, being approximately 39.5 mm each. There is no stamp or distinguishing mark of any kind, except near the center of one base there is a faint lathe or tool mark of circular form, thus: ⊙. The weight is contained in a square mahogany box, on the cover of which is a circular silver plate bearing the inscription "Kilogramme comparé pour son Poids à l'Étalon Prototype des Archives de France, et vérifié par M. Arago. Fortin fecit." No particulars of Arago's comparison with the kilogram des Archives were furnished, and consequently it is not known what means were used by him in making his comparison nor whether he reduced his weighings to vacuo. It was not until 1879 that the Arago kilogram was compared with any other standards of recognized authority. It is true that it was compared between 1852 and 1873 with a couple of kilograms in the possession of the Office of Weights and Measures, but as both of these weights were of brass and of unknown density, no great reliance could be attached to the results. In 1879, however, it was taken to England and there compared with the British platinum kilogram in the custody of the Standards Office. This comparison indicated that the Arago kilogram was 4.25 mg light, but this result could not be considered conclusive, on account of certain assumptions made in the

^a The toise was the French standard of length prior to the adoption of the meter, and all the measurements upon which the meter is based were made with the toise. Its length is 1.949+ meters.

reduction to vacuo and also in regard to the correction to the British kilogram.

In 1884 the weight was taken from the Standards Office in London, where it had been since 1879, to the International Bureau of Weights and Measures at Paris, and there compared with two auxiliary kilograms whose values in terms of the kilogram of the Archives were known with the greatest accuracy. The results obtained from the comparison confirmed that previously obtained from the comparison with the British kilogram, the result giving

$$K\dot{a}=1,000 \text{ g}-4.63 \text{ mg.}$$

As the weights supplied to the States were to be made of brass, it was more convenient to compare them with a brass standard, and in order to do this two secondary brass standards were carefully compared between the years 1873-1876 with the Arago kilogram and afterwards used in all the work of adjustment and verification. One of the kilograms, known as the Silbermann kilogram, was presented to the United States by France in 1852, together with a number of other weights and measures. The other kilogram used was one made in the Office of Weights and Measures and was identical in form and material with the kilograms subsequently furnished to the States.

The unit of capacity in the metric system being defined as the volume of the mass of 1 kilogram of pure water at the temperature of maximum density, the most convenient way to adjust such measures, and in fact all capacity measures, is by weighing the water they contain. The only two material standards that need to be considered, therefore, in connection with the metric weights and measures furnished to the States in accordance with the act of 1866 are the committee meter and the Arago kilogram described above.

By the end of 1880 practically all the States had been supplied with sets of metric weights and measures consisting of the following denominations:

Length measures	One brass-line meter.
	One steel-end meter.
Capacity measures.....	One liter made of brass.
	One decaliter made of brass.
	One myriagram made of brass.
	One kilogram made of brass.
	One $\frac{1}{2}$ kilogram made of brass.
Weights	One gram made of brass.
	One set of small silver weights from
	4 decigrams to 1 milligram.

It is necessary at this point to go back a few years and give an account of the establishment of the International Bureau of Weights and Measures, since the present fundamental standards of length and mass for the civilized world result from the establishment of that institution.

In response to an invitation of the French Government, the following countries sent representatives to a conference held in Paris on August 8, 1870, to consider the advisability of constructing new metric standards:

Austria,	Italy,	Spain.
Ecuador,	Norway,	Switzerland.
France,	Peru,	Turkey,
Great Britain,	Portugal,	United States,
Greece,	Russia,	Colombia.

in all 15 countries. This conference was of short duration, on account of the war then raging between France and Germany.

A second conference was held two years later, at which 30 countries were represented, the United States again being among this number. At this conference it was decided that new meters and new kilograms should be constructed to conform with the standards of the Archives, and a permanent committee was appointed to carry out this decision. The preparation of the new standards had advanced so far by 1875 that the permanent committee appointed by the conference of 1872 requested the French Government to call a diplomatic conference at Paris to consider whether the means and appliances for the final verification of the new meters and kilograms should be provided with a view to permanence, or whether the work should be regarded as a temporary operation.

In compliance with this request a conference was held in March, 1875, at which 19 countries were represented, the United States as usual being of this number.

On May 20, 1875, 17 of the 19 countries represented signed a convention which provided for the establishment and maintenance of a permanent International Bureau of Weights and Measures to be situated near Paris and to be under the control of an international committee elected by the conference, the committee to consist of 14 members, all belonging to different countries.

In addition to the primary work of verifying the new metric standards the bureau was charged with certain duties, the following being the most important:

(1) The custody and preservation, when completed, of the international prototypes and auxiliary instruments.

(2) The future periodic comparison of the several national standards with the international prototypes.

(3) The comparison of metric standards with standards of other countries.

The expenses of the bureau were to be defrayed by contributions of the contracting Governments, the amount for each country depending upon the population and upon the extent that the metric system was in use in the particular country.

In accordance with the terms of the convention the French Government set aside a plat of ground in the park of St. Cloud, just outside of Paris, and upon this ground, which was declared neutral territory, the International Bureau of Weights and Measures was established.

The construction of the meters and kilograms had been intrusted to a special committee, and early in 1887 the committee completed its work and the new meters and kilograms were turned over to the International Bureau for comparison with the standards of the Archives and with one another.

It had been decided as early as 1873 that the new standards should be made of an alloy of 90 per cent platinum and 10 per cent iridium, and that the meters should be line standards of the "X" cross section. Altogether 31 meters and 40 kilograms were constructed.

By 1889 the entire work was completed, and in September of that year a general conference was held at Paris, and by it the work of the international committee was approved.

The meter and kilogram which agreed most closely with the meter and kilogram of the Archives were declared to be the international meter and the international kilogram. These two standards, with certain other meters and kilograms, were deposited in a subterranean vault under one of the buildings of the International Bureau, where they are only accessible when three independent officials with different keys are present. The other standards were distributed by lot to the various Governments contributing to the support of the International Bureau. Those falling to the United States were meters Nos. 21 and 27 and kilograms Nos. 4 and 20.

Meter No. 27 and kilogram No. 20 were brought under seal to this country by Mr. George Davidson, of the Coast and Geodetic Survey, and on January 2, 1890, they were opened at the White House and accepted by President Harrison, who certified that they were received in good condition, and that he confidently believed that they were the standards referred to in the report. The other two standards were

received the following July and were deposited in the Office of Weights and Measures, where those accepted as national standards by the President had already been taken.^a On April 5, 1893, the Superintendent of Weights and Measures, with the approval of the Secretary of the Treasury, decided that the international meter and kilogram would in the future be regarded as the fundamental standards of length and mass in the United States both for metric and customary weights and measures.

This action did not in any way affect the metric weights and measures of the United States inasmuch as the meter and kilogram of the Archives had always been regarded as our fundamental metric standards, and the international meter and kilogram had identical values so far as could be determined by the most refined measurements.

The effect of this decision on the customary weights and measures also left them practically undisturbed. All comparisons made immediately prior to 1893 indicated that the relation of the yard to the meter fixed by the act of 1866^b was by chance the exact relation between the international meter and the British imperial yard within the error of observation. A subsequent comparison made between the standards just mentioned indicates that the legal relation adopted by Congress is in error by one ten-thousandth of an inch; but in view of the fact that certain comparisons made by the English Standards Office between the imperial yard and its authentic copies show variations as great, if not greater, than this, it can not be said with certainty that there is a difference between the imperial yard of Great Britain and the United States yard derived from the meter.

The case of the pound was slightly different, inasmuch as the relation of the kilogram to the pound, fixed by the act of 1866, was only approximate. In the act mentioned the kilogram was stated to be equal to 2.2046 pounds avoirdupois; but as 2.204622 was known to be a more precise value, and since it did not conflict with the legal value the avoirdupois pound was declared to be equal to $\frac{1}{2.204622}$ kilograms.

Neither the troy pound of the mint nor the copies of the imperial yard in the possession of the Office of Weights and Measures were satisfactory standards. The mint pound is made in two pieces, the knob being screwed into the body; hence its density can not be deter-

^a Upon the establishment of the Bureau of Standards on July 1, 1901, all standards and other property in possession of the Office of Weights and Measures passed under the control of the Bureau of Standards.

^b The value of the yard, in accordance with the above declaration, is 1 yard = $\frac{3}{4000}$ meter.

mined by weighing in water on account of danger of leakage. Moreover, it is made of brass not plated, and therefore liable to alteration by oxidation.

The bronze yard No. 11, which was an exact copy of the British imperial yard both in form and material, had shown changes when compared with the imperial yard in 1876 and 1888 which could not reasonably be said to be entirely due to changes in No. 11. Suspicion as to the constancy of the length of the British standard was therefore aroused.

On the other hand, the new meters and kilograms represented the most advanced ideas of standards, and it therefore seemed that greater stability in our weights and measures as well as higher accuracy would be secured by accepting the international meter and kilogram as fundamental standards.

Time has amply proved the wisdom of this action, and therefore when the Bureau of Standards was established in July, 1901, the decision made by the Office of Weights and Measures in 1893 to adopt the meter and kilogram as fundamental standards was fully accepted by this Bureau.

In conclusion I wish to state that in preparing so brief an account of so great a subject many matters of importance and interest have necessarily been omitted, but if I have succeeded in giving you an outline of the growth of our weights and measures I shall have accomplished all that I had in mind when this paper was prepared.

Remarks of Mr. DANIEL C. V. PALMER, *Deputy Sealer of Weights and Measures of the State of Massachusetts.*

MR. CHAIRMAN AND GENTLEMEN: The standard weights and measures of Massachusetts are in the possession of the treasurer of the Commonwealth. He is charged with their proper care and custody by law, and they consist of the standards furnished by the National Government in 1843 and such additions as have since been made at the expense of the State.

The treasurer, who is elected annually by popular vote, and who can not continue in office for more than five consecutive years, is the sealer of the Commonwealth.

The duties pertaining to weights and measures are prescribed by law and are delegated by the treasurer to a "deputy sealer of weights and measures," appointed by him. The deputy is provided with an office at the State capitol, in which are located all of the standards of the Commonwealth. He is paid by salary and is allowed the necessary expenses of travel, etc., incurred in the official performance

of his duties, no fees being charged for work performed by him. Certain duties are required of him by law, to wit :

First. It is his duty to inspect and adjust once in five years, or oftener if desired, the sets of standard weights and measures furnished without cost to the various cities and towns by the Commonwealth. These sets consist of standards of dry, liquid, and linear measure, with a complete set of weights and finely constructed balances, with a capacity of 50 pounds, all contained in an oak case with sliding glass front. These standards are placed in the custody of the local treasurer, who is charged by law with their proper care, and are used for the purpose of comparing the working sets of the local sealers of weights and measures.

Second. He is authorized to make inspections in any locality to ascertain if the local officers are properly performing their work, and if a violation of the law is found he may, if he sees fit, make a prosecution.

The city and town sealers and deputy sealers of weights and measures are appointed annually by the mayor of the city or the selectmen of the town. They receive from the local treasurer, at the expense of the city or town, one or more duplicate sets of standards, to be used as working sets, together with suitable seals, tools, record books, etc. They then proceed to work by giving notice to all persons to bring their weights and measures to the office of the sealer, to be tested and sealed. This office is conveniently located and is equipped with suitable conveniences for the purpose of testing, etc. After waiting a reasonable time they proceed to the places of business of all persons who have neglected to comply with his notice and inspect their weights and measures. Articles tested and found to be correct are sealed; those which are incorrect, but which can be adjusted, are marked with a "Condemned" tag, which is removed by the sealer after the defect which the test showed has been removed. Articles which are incorrect, and which can not be adjusted, are stamped "Condemned" in such a manner that it can not be detached. Suitable penalties are provided for the use of scales, measures, etc., which are unsealed or which have been condemned.

The local inspection by the State official has a tendency to keep the local officials constantly on the alert. A large proportion of the false weights and measures in use are found among the hawkers and peddlers, who resort to varied and original methods of alteration. Some of the seizures show spring balances with movable fronts, dry and wet measures with false bottoms and sides, and many other specially constructed devices for fraudulent use. It would be useless to

estimate the loss to the purchaser from the use of false weights and measures, and in many instances this loss falls on the poorer class of people, who can least afford it. To illustrate the necessity of legislation in States in which no attempt at inspection is now made, I will cite the following instance: When special legislation was passed in Massachusetts several years ago for the inspection of strawberry boxes and the sealing of milk jars and bottles, to which previously no attention had been paid, thousands of the so-called "short" boxes and bottles, which did not meet with the requirements of the law, were shipped to an adjoining State, in which little or no attempt was made to inspect weights and measures.

Although the Massachusetts law was of much earlier origin, no attempt was made at a general enforcement of the same until 1890. Since that date such changes and additions have been made in the statutes as experience and practice showed necessary, until at the present time, with a few exceptions, I believe that we have a good and practical law.

I will cite these exceptions, in order that States about to establish legislation may be benefited:

First. The State should create a separate and distinct office for this work, the person in charge to be known as the State sealer, who should be appointed by and be responsible to the governor. This system has been adopted and is now in force in the State of Rhode Island and gives entire satisfaction.

Second. The office of sealers in the cities and towns should be placed in the civil-service list and a suitable examination required, with a view to obtaining persons who are entirely competent for the work.

I would also recommend that these officers be required to make an annual report of work performed to the State sealer.

Third. That no fees whatever should be charged for the inspection and sealing of weights and measures, the local officer being remunerated by a salary consistent with the work required, to be paid from the city or town treasury. The work performed by this officer is in the nature of a protection to all inhabitants, and the cost of maintenance, in my opinion, should be paid from the public fund. This system would also increase the efficiency of the local inspection, as it would allow tests to be made in suspicious cases several times during the year instead of annually.

The importance of a State supervision in these matters can best be realized when you consider that scarcely a commodity is bought or sold in which weights and measures do not enter into the transaction,

and when systematic and thorough inspections are not made the public is to a large extent at the mercy of the unscrupulous dealer.

There is also a great necessity for national legislation in relation to certain commodities shipped in original packages for interstate trade, and which can not be governed by State regulation. I will, however, only refer to this, as I understand the Bureau of Standards has this matter under consideration.

Any further information as to the Massachusetts law and its enforcement will be cheerfully furnished on application by mail to the State sealer, at room 230, State House, Boston, Mass.

Remarks of Prof. LAENAS G. WELD, *State Superintendent of Weights and Measures, of Iowa.*

GENTLEMEN: I assure you that this is entirely extemporaneous, and I have brought nothing with me in the way of illustrative material. The laws of Iowa are tabulated in the publication just presented to us, and it is, therefore, unnecessary for me to discuss them in detail. This tabulation of the laws of the several States relating to weights and measures seems to me to be a step of the greatest importance in this connection, and one which will certainly be helpful in securing uniformity in legislation along these lines. We have already seen in the merely cursory examination of the volume that it is full of suggestions; for there are certainly excellent features in the laws regulating the matters of present interest to us in each of the several States.

The situation in Iowa with respect to the office of State superintendent of weights and measures is unique. The town of Iowa City was our first State capital. Upon the removal of the capital to Des Moines, in 1857, the grounds and buildings vacated were turned over to the State University, and are still a part of its realty. The old capitol building, the corner-stone of which bears the date July 4, 1840, is now the administrative building of the university. Before the removal of the capital there had been built upon its grounds a little fireproof vault, in which the standards of weights and measures were kept. This still stands on the campus of the university, and is still devoted to its original use. For it was provided in the constitution of the State that the State superintendent of weights and measures should be "appointed by the governor from the board of professors of the university, to hold his office during the pleasure of the governor, and to give bond in the penal sum of \$5,000 for the faithful discharge of his duties." My predecessor, as professor of

mathematics in this institution, had held the office for many years, and kindly passed its duties and emoluments to me. These emoluments being very modest, the duties are naturally very light. In fact, as matters stand, there is very little to be done. The vault in which the standards are kept is a brick structure about 24 feet square and practically fireproof. It is now in the shadow of large buildings, and its use is scarcely known even to the students of the university. In fact, the building is shrouded in a sort of mystery, and even has the reputation of being haunted. It is, nevertheless, kept in good order, and will probably stand for many years to come.

Our standards are, I believe, the same as those in the possession of the other States, and include the balances, weights, and measures distributed by the Office of Weights and Measures about 1854, besides a set of metric standards of comparatively recent date. It has seemed to me that the old standards must have been of much better material and finish than the later metric standards, or else these last have been abused. At any rate, they have been so corroded that their value as standards is impaired, while the older weights and measures are still in good, if not perfect, condition. I was amused upon hearing of the fate of the set of standards sent by this Government to Siam, as narrated by Mr. Fischer. I can report a happier situation with reference to the standards presented the French Government. Some years ago, while strolling through the Conservatoire des Arts et Métiers, in Paris, I came upon these standards beautifully displayed in glass cases, along with a series of Foucault's gyroscopes and other instruments. They seemed like old friends, you may be sure.

The laws of Iowa with reference to weights and measures are, like those of other States, exceedingly lax. With us there is nothing obligatory. It is merely specified that the State superintendent is to furnish counties and cities such standards as they may require, these to be compared with the United States standards in his possession. Neither the counties nor the cities are compelled to procure standards. The statutes provide, moreover, that the board of supervisors of any county, or the council of any town, may appoint a sealer of weights and measures to hold office at the pleasure of the appointing power. I do not know, however, of more than three or four of the 99 counties in Iowa in which the provisions of the statute have been followed, and in these cases the duties of the office have been added to those of the county treasurer or of the superintendent of schools. Some of the larger towns have made

occasional efforts to secure some sort of general inspection, particularly of public scales, but have in no case developed any effective system. The councilors do not seem willing to vote the expense necessary. At one time or another 14 of our counties have procured more or less complete sets of standards. Others may have done so, but, if so, the fact is not shown by the records in my office.

One of the provisions of the Iowa code is that once in ten years the State superintendent shall call in all standards issued to the several counties and towns and inspect them. I do not know when a previous inspection was made, but about seven years ago, after I had been in the office for ten years, I made a conscientious attempt to comply with this requirement of the code, and issued notices to the auditors of the several counties to that end. Less than one-half of these officers responded. Of those replying, the great majority knew nothing about the matter. Some of them had heard something about a set of standards, but did not know where they were to be found. In a few instances only the standards were returned to Iowa City, as directed. The condition in which they arrived was such as to discourage any further attempts to induce the purchase of sets of standards, at least by the counties. Some of the others looked as though they had seen service in the granary or cellar, and there was apparently no consciousness that they had been misused so long as they were still intact. The officers who had had charge of them had evidently had no conception of the difference between a standard and a commercial measure or weight, and this is, of course, perfectly natural, considering that they could have had no instruction in the matter.

Our enlightened governor has shown from the first an interest in the action taken by the Bureau of Standards, which has led to our assembling here. Upon his recommendation, and with his assistance, an item was introduced among the minor appropriations made by our last legislature providing for the expenses of this delegation. It will not be difficult, I foresee, to interest a future legislature in the matter, and if this movement is pushed I am confident that the State of Iowa will be found in sympathy with it as soon as it is understood. Personally, I shall do all in my power to aid the Bureau of Standards in its efforts to secure in Iowa more general inspection and such legislation as may be found most desirable for the country at large. The time will presently come, I hope, when it will be necessary for me to lay down the office in my own State, in order to make way for some one whose other interests are not dominant, for some one with the necessary scientific training and endowed with the

energy and executive ability essential to successful administration. I thank you.

AFTERNOON SESSION.

DR. STRATTON. We regret very much that the Hon. D. Linn Gooch, representing the State of Kentucky, was not able to remain for the afternoon session and give us some idea of the condition of affairs in Kentucky. We would like now to hear from Mr. Fowler, of Michigan.

Remarks of Mr. W. H. FOWLER, *Deputy State Treasurer, representing the State of Michigan.*

MR. CHAIRMAN AND GENTLEMEN: I did not come prepared to make any remarks. I have but little to say at the present time.

In Michigan there is not very much attention paid to State inspection of weights and measures. Under an old statute the State treasurer is the State sealer of weights and measures, and I have been occupying the position of deputy State treasurer for the past four years. The State treasurer's salary is so very small, unfortunately, fixed in the constitution of Michigan, that active work of the department devolves largely upon the deputy.

When I went there as deputy we had a room in connection with our department. (By the way, I will say that there is one thing in Michigan we feel quite proud of. We have a very good building at Lansing. It was built with an appropriation of a million and a half. It is one of the things that could be recommended to many building commissioners. It was very well built, and about \$28,000 of the original appropriation returned to the State. It is one of the red-letter marks of our State—a government building put up within the appropriation.) We have a room with a set of weights and measures and testing scales. Whether they are positively accurate or not I do not know. Whether they are the set that Mr. Fischer spoke of, I don't know, but they have been kept in good condition and look very well.

In the past four years I have not had more than five or six sets of weights and measures to test and seal. The Michigan law is shown in this compilation that has been prepared by the Bureau. It is provided in the statute that the State treasurer should inspect and seal for the counties, and that the counties should have their sets re-inspected once in five years. There is no record kept of county testing. I do not know of any sets received back for reinspection. The five

or six that we have inspected, as I now recall, were most of them for cities. I have had some correspondence with county officials, and have told them that if they would procure sets of weights and measures, and have them sent to us, we would inspect and seal them and reship to them. Very little has been done about it. Detroit and Grand Rapids both have city sealers of weights and measures, and both have sent us sets for inspection. Grand Rapids during the past year revived an old statute appointing a city sealer of weights and measures, and he had a fairly complete set sent to us for inspection. I noticed in the Grand Rapids papers that he took up quite an active campaign in going about among storekeepers and getting after peddlers. In several cases he found street peddlers using under-size measures for peddling vegetables and fruit. Michigan is a great fruit-producing State. A good deal is peddled and shipped away, berries and peaches especially. They are shipped in boxes and baskets very largely. The sealer of weights and measures in Grand Rapids has recently resigned his position. The mayor has taken the stand that he would not appoint a city sealer; that the work could be done by the police department without extra expense to the city, so I do not think they are very much agitated there over the subject.

A steel die is used by us with the letter "M," and it is provided that weights and measures shall be stamped with that die. I have sometimes thought that it would be certainly very easy for somebody else to get a duplicate of it, and we could not tell afterwards whether we or some one else did the stamping. It seems to me that if we are endeavoring to get up a uniform system, something that had more character to it and showed to the general observer more definitely that it was an official inspection, could be gotten out, rather than something so very indefinite as stamping a letter with a steel die.

Mr. PALMER. That is a very good suggestion about having a uniform seal. We found our law defective in this respect, so the legislature adopted a regulation that all stamps should be approved by the State department.

Professor WELD. One of the provisions of the statutes in Iowa is to the effect that when the State sealer inspects a weight he shall put upon it such private marks as may enable him in future to identify it.

Mr. FOWLER. No record has been kept. There is no provision for fees, although there is in the law for county inspection. I inquired when I went there as to what fee ought to be charged. If no statutory fee exists, the State official shall charge such fee as seems right

and compensatory for the work. I would like to ask, Mr. Palmer, if you have a regular fee for testing county weights?

MR. PALMER. No, sir; we do not. Previous to 1890 fees were paid by the cities and towns. At present all work performed by the State officers is free.

MR. FOWLER. I have followed largely the fees I found by inquiry were charged by previous administrations. We have charged \$15 for inspection and sealing of complete sets. I would like to hear from Dr. Stratton as to what he thinks the fee should be. I agree with Mr. Palmer that it ought to be done at the general expense of the State, or of the county, instead of charging a fee in any case.

DR. STRATTON. This Bureau does not charge any fee for State inspection. The work done for the State, or for State educational institutions, or for any State institution, is done free. The State should do the same for the counties and cities. I have never known the charging of fees to be a success, and have never found a sealer who had to do with fees who did not wish it was the other way. That is one of the subjects we ought to discuss here.

MR. FISCHER. If I am not mistaken, the salary of the sealer of weights and measures in the District of Columbia was changed from a fee to a salary basis just prior to the appointment of the present incumbent.

Remarks of MR. ISAAC B. BROWN, *Secretary of Internal Affairs, and ex officio State Officer of Weights and Measures of the State of Pennsylvania.*

MR. CHAIRMAN AND GENTLEMEN: In the official duties imposed upon me as an officer of Pennsylvania I have but little to do with weights and measures. Briefly, however, I will say that in 1834 a law was passed by our legislature authorizing the appointment of sealers of weights and measures in the several counties of the Commonwealth.

Under the National law, standards were furnished and were kept, as provided by our Pennsylvania statutes, in the custody of the secretary of the Commonwealth. I know but little of the difficulties which may have been encountered in the administration of the laws of our Commonwealth in regard to inspectors of weights and measures.

However, the law and the manner in which it was executed had become unpopular, and its repeal was effected by the legislature of

1883. The commercial affairs of the State moved on uninterruptedly. However, there may have been many short weights and many wrongs perpetrated in the use of scales and measures.

In 1895 the legislature provided for the appointment by the governor of inspectors of weights and measures in cities of the first and second classes. The cities covered by this act are Philadelphia, Pittsburgh, Allegheny, and Scranton. The act was defective in three different ways: First, I believed it to be unconstitutional, as it was local legislation within the prohibiting clause of the constitution, which makes it illegal to pass any local law affecting cities, boroughs, and townships, or creating any legal or special offices for such municipalities. It was again defective in that the amount of money appropriated was not sufficient to procure the equipment for the inspectors of weights and measures. It was again defective in that no provision was made for standardizing the equipment which might be purchased for the use of inspectors of weights and measures in these cities.

These defects will be apparent to you when I say that it would cost about \$15,000 to buy the necessary equipment and the amount appropriated was only \$2,500.

Again, the United States standards which had been furnished by the Government of the United States had been destroyed by fire at the time of the destruction of the State capitol. And as the State law required that this National equipment should be used to standardize the equipment which might be furnished inspectors, it will also be seen how difficult, and I may say impossible, to execute our law. The duties with reference to the purchasing of the equipment were imposed upon the secretary of internal affairs, an office which I have the honor of holding.

I made every possible effort to execute the law, though from the first I believed it to be unconstitutional. I corresponded with the manufacturers of weights and measures, and I had no little correspondence with the United States Bureau of Standards. I had no money appropriated, either to buy a new set of United States standards, which would cost \$550, nor had I any means or authority of getting the equipment I might purchase standardized under United States authority or by any authority.

Political pressure was brought to bear compelling me to furnish the equipment to inspectors of weights and measures, who had already been appointed by the governor. This pressure was carried to such an extent that the attorney-general of Pennsylvania commenced mandamus proceedings to compel me to purchase the equipment, that the appointees might be able to proceed with the discharge of their duties;

and last, but not least, to enable them to draw salaries, which they so much wanted. This want is quite common to all of us.

In due process the case was taken into our courts, and the opinion of the court below was that the act was unconstitutional and that I was justified in refusing to execute the law. I have understood that the case has been appealed to the supreme court; however, the paper book on the part of the attorney-general has not been furnished me.

I refer to these matters to indicate to you that the situation in Pennsylvania with reference to weights and measures is by no means satisfactory.

I listened with great pleasure to the paper read on the subject of the history and development of the laws with reference to weights and measures. The paper read was most instructive, and reflects great credit upon the energy and perseverance of the gentleman who so kindly favored this conference with his address on a subject which is becoming more important as we attempt to unravel its mysteries.

While I do not profess to fully understand the needs of the situation, it occurs to me that there should be additional legislation on the part of the National Government, and that there should be an assimilation of the laws in the several States on this very important subject.

The gentleman from Massachusetts gave us an interesting account of the operation of the law in that State, and I have no doubt but that the law to which he refers is practically perfect, for the people of Massachusetts well know what the right thing is, and they know full well how to do it.

I think that this organization should be permanently effected, to the end that there may be annual meetings of the proper representatives of the different States of the Union with the officers of this National Bureau of Standards, its purpose being to effect an assimilation of the State laws and to assist in the passage of a proper national law.

A committee should be appointed at this session, empowered to prepare and report at the next meeting of this purposed association such legislation as will insure uniformity in the several States. That this Government has existed all these years, with its wonderful and now limitless commercial interests, with these laws relating to weights and measures in such incongruous, inconsistent, and inequitable condition is truly astounding.

In my capacity as secretary of internal affairs I have been called into conference every year since 1889 on the question of National and State supervision of railroads and transportation corporations.

To-day the establishing of rates of a uniform and reasonable character is a question of paramount issue in National legislation. These questions are difficult of solution, wherein is involved the establishing of a division line between State and National supervision. It will be less difficult to establish a proper line between National and State supervision over weights and measures than it is to establish such lines on questions involving the transportation of persons and commodities.

Mr. Chairman, we will have done great service to the States which we represent if we shall succeed in establishing uniform laws in the several States and be able to arrive at a consensus of opinion with reference to suggesting to the National Congress a bill giving proper scope and authority to the officers of the National Bureau of Standards.

Dr. STRATTON. I am sure we all agree with what Mr. Brown has said. The point he brought out with regard to the line between National and State affairs has concerned us a great deal. We have given much thought to this subject, but, as he stated, I think that the line is going to be more easily drawn here than in almost any other of our public affairs. I am sure we are very greatly indebted to Mr. Brown for a number of very valuable suggestions. We should like now to hear from Mr. Richardson, of Virginia.

Remarks of Mr. JOHN W. RICHARDSON, *Register of the Virginia Land Office and ex officio Superintendent of Weights and Measures.*

Mr. CHAIRMAN AND GENTLEMEN: In a convention of State sealers of weights and measures, to consider and confer upon better methods of giving the people a simpler and more correct system of testing the scales and measures they are forced to purchase by, I deeply regret that my section is so poorly represented. Aside from Mr. Gooch, member of Congress from Kentucky, representing his State sealer, I am, I believe, the only representative from the entire South.

In Virginia the register of the land office is ex officio superintendent of weights and measures, and having been elected register in 1897, I, by virtue of that office, became superintendent of weights and measures, and took charge March 1 of that year. In an examination of the law bearing on the actions of the office I found that the office had once been a separate State department with a salary attached, and that its duties had since been dumped into the lap of the register

of the land office, with the salary appendix cut off. Of course that made no difference in my attention to its duties when there were any to perform, and I will here state they were few and far between.

My recollection now is that since I took charge of the office I have been called on by one county sealer for a set of weights and measures, which was shipped from the supply, hoary with age from long confinement in the dingy and dark recesses of the basement of the capitol. I suppose that other county sealers have been previously supplied, and if not, that but little or no attention is being given to the testing of measures and scales. Our system seems to me to be inadequate, clumsy, and complex, and I trust that at this or future meetings of State sealers some simple, uniform, and efficient system of testing will be suggested, and the several States be asked to adopt and enact the same into law. I would suggest in this connection that it be made obligatory on each State to purchase for their sealers from the United States Bureau of Standards a complete set of up-to-date testing apparatus, which shall be tested and put in order by some officer from the Bureau of Standards, upon request of State sealers, at the cost of the State.

Virginia law requires the testing outfits furnished to county sealers to be manufactured within the State. This is an error, and a new set of laws on the subject should contain a section requiring that these supplies be purchased through the United States Director and Superintendent of the Bureau of Standards, who, by having them all manufactured by one firm, can furnish them at much less cost than they could otherwise be obtained.

Under our law, measures and weights are only required to be tested and sealed every ten years from the time they were at first sealed. This is a farce and this law should be wiped out.

It is no wonder that people complain about short weights when for a space of ten years the owners and users of measures and scales are immune from inspection and testing.

You have observed from the laws I have called attention to how inadequate they are, and can readily see in how great need my State is for better laws regulating the testing and sealing of measures and scales.

I hope that the States here represented to-day and all those that will hear of this meeting will be awakened to the need of a better system, and will at the next convention of State sealers have their representatives present, ready to join hands in formulating and getting a better system enacted into law.

If inspection and testing of measures and scales is worth anything to the public, it should be done in a proper manner and by competent officials, paid a fair salary. In my State the superintendent gets no salary, and the county sealers almost nothing; and hence with poor laws, poor salary, and, consequently, poor sealers, how can we expect a satisfactory job?

The attendance upon this meeting, though small, is gratifying, in that it shows that some interest is being felt in this important subject, and I hope with this nucleus for a start, and the report that will go out from this meeting to the sealers of States not here represented, that we will have a sealer present from every Commonwealth in the Union at our next meeting, and that all hands will pull together for the enactment of better laws bearing on testing and sealing measures and scales.

Dr. STRATTON. He has brought out one point there that the Bureau has often come in contact with, and that is that it is very difficult to procure proper weights and measures to be used as standards by the State and city officials. We continually receive letters from these officials asking whether they can get sets of standards, and where. Different makers have designed weights and measures according to the demand for them, but there has been nothing manufactured in the way of a simple, accurate, cheap standard, especially of capacity measures and weights—nothing between rough cast-iron weights and finer weights used by chemists.

About a year ago the Bureau undertook the design of a set of these standards, had some made first, and tried them and modified them. Finally the Bureau gave the plans of these weights and measures to the different makers. I believe one has an exhibit here. Still, much is to be done. It is difficult, as two gentlemen have brought out to-day, to procure these standards at a reasonable price anywhere to-day. I would now like to hear from Mr. Haskell, sealer of the District of Columbia.

Remarks of Mr. W. C. HASKELL, Sealer of Weights and Measures of the District of Columbia.

MR. CHAIRMAN AND GENTLEMEN: I have been very much interested in the exchange of views and suggestions made at this meeting, and believe much benefit is to be derived therefrom.

In the District of Columbia the sealing of weights, scales, and measures is compulsory, and no person can sell or offer for sale lawfully, anywhere in the District, any merchandise unless the same shall have been weighed or measured in scales or measures which have been duly inspected and sealed by the sealer or assistant sealer of weights and measures. Heavy fines are imposed for violation of the law. The number of measures, scales, and weights which do not conform to the standards, and which find their way into use each year, is very large. To illustrate, we have condemned and destroyed on an average of about 1,000 pieces each year of my incumbency. To be exact, 5,472 pieces have been seized and destroyed during the past five years. If we had destroyed all the scales that we found out of order or weighing incorrectly, the number would have been largely increased. We repair such scales as we can, and those we can not are labeled "Condemned for repair" and left with the owner a short time, after which, if he has not caused the repairs to be made, the scale is confiscated. These scales are usually from 1 to 3 ounces deficient to the pound, which, in the aggregate, amounts to a very considerable loss to the consumer, and this loss usually falls upon the people who can least afford it. After seven years' experience as sealer of weights and measures I can not express myself too emphatically relative to the necessity of a supervision by public officials of all scales, weights, and measures used in weighing or measuring, and such an office is of much more importance to the merchant and the public than is usually conceded it.

MR. RICHARDSON. May I ask you a question? Do you believe that sealing and stamping causes the dealer to be honest after you leave him?

MR. HASKELL. Sealing and stamping does not necessarily cause a dealer to be honest after we leave him. If, however, he does then violate the law, we know that it is not through ignorance, but with intent to defraud, and we immediately proceed against him in the police court. If we have any reason to believe that he will manipulate his scale after we leave we keep him in mind, and return in a few days and observe the conditions at his store. Activity and diligence are necessary to cope with the many ingenious methods resorted to in an attempt, on the part of some dealers, to deceive and defraud the public.

The office is also charged with the inspection of the weight of coal,

and is authorized to take up coal carts, or wagons loaded with coal, anywhere in the street and demand the certificate which the law requires each dealer to send out with the load, showing the gross, tare, and net weights, and to verify the weights shown. When a shortage is found, which indicates intent to defraud, the case is reported and information filed in the police court.

The office of the sealer of weights and measures in the District is a salaried one, which, I think, is much better than if it were operated under the fee system—that is, retaining fees collected for services. Fees are collected for stamping measures, scales, and weights, under a schedule arranged by the honorable Commissioners, and these collections are deposited as are other revenues of the District.

Mr. RICHARDSON. The only way to prevent the use of false measures is by frequent inspection.

Mr. HASKELL. Frequent inspections are an aid in preventing the use of false scales and measures. Our inspection of scales is made semiannually, and it requires practically six months to cover all the inspections in the District. We have routes laid out for each day, and record cards showing the places to be visited. These cards are so arranged that they record the inspections for five years, so that when we visit a place of business we have before us a record of the number of scales due for inspection and also the conditions of same at the previous visits.

Mr. RICHARDSON. That is getting to a practical point.

Mr. HASKELL. A receipt for the amount collected is given. The sealer of weights and measures has also been given the immediate supervision of the District markets, three in number, and the market masters; public hay scales and weighmasters of same, and the inspectors of lumber, wood, flour, and steam boilers.

A DELEGATE. Have you ever found cases where scales are long in weight?

Mr. HASKELL. Yes; we frequently find scales weighing against the dealer, and we are quite as careful to correct them as the scales which are short in weight. Hay scales and wagon scales are inspected semiannually, and a certificate of inspection, showing the condition of the scale, is placed on it. If we find that they are not weighing within

the tolerance allowed, the scale is condemned for repair and must be repaired and approved by the sealer or his assistant before it is again used.

A DELEGATE. What does the system cost the District of Columbia?

MR. HASKELL. In salaries, \$6,080.

A DELEGATE. That does not include the sealers or the inspectors?

MR. HASKELL. Yes, sir. The salary of the sealer is \$2,500. There is an assistant sealer at \$1,200, one at \$900, a clerk at \$1,000, and a laborer at \$480. The salaries of the market masters are appropriated by Congress, as are the salaries of the officials mentioned. The inspectors of wood are paid 9 cents per cord, and the lumber inspectors receive 30 cents per thousand feet measured, for their services. The law clearly specifies how wood shall be corded, and all wood that comes into the city for sale is corded under the supervision of the inspector. Amendments to our laws have been recommended to Congress by the honorable Commissioners. National legislation, followed by State legislation of a uniform character, is very essential. I am of the opinion that the size of a barrel in which potatoes and apples are shipped should be the same size throughout the country.

MR. RICHARDSON. The same size as in Richmond, Va.?

MR. HASKELL. Yes, sir. There should be a standard size for all original packages of fruits and vegetables shipped to commission merchants.

MR. RICHARDSON. Where do you get your standards?

MR. HASKELL. From the Bureau of Standards, in the city of Washington, where we send our weights and scales to be adjusted when it is necessary to do so. A permanent organization of State sealers would result in much good, I am sure, and I hope that a uniform system of weights and measures, and inspection and sealing of same, may be adopted. I extend an invitation to the gentlemen present to call at my office, where I can show them a collection of false scales and measures confiscated during the past three months, which will be a practical demonstration of the work we accomplish and of the benefits to be derived from a supervision of scales, weights, and measures.

Mr. RICHARDSON. Let the Bureau of Standards wait on us all.

Dr. STRATTON. That's just what the Bureau is for.

Mr. FOWLER. Mr. Richardson's remark concerning the small fees allowed for testing weights and measures made me refer to the Michigan law, where the township clerk is sealer of weights and measures. Some time in the month of April he posts a written notice for the people to bring weights and measures to be tested, and the law provides the liberal compensation for trying, proving, and sealing of 3 cents for each scale found not to be proper and 2 cents for each scale found to be proper.

Mr. RICHARDSON. I see more and more the need of this meeting.

Mr. FOWLER. In another place it says: "Once in every year he shall go to the houses, stores, and shops, where they do not come to him, and for such service he shall receive double the fees and 4 cents a mile mileage." If he had to carry our weights and measures (they are not quite as heavy as yours, Mr. Richardson) I don't think the sealer would ever get very wealthy.

Mr. PALMER. Mr. Chairman, I believe in union there is strength; at least we find it so in Massachusetts. We have county organizations. We have State organizations of sealers of weights and measures. They meet once each year to formulate plans of legislation, and it has proved of great assistance in the passage of legislation. It makes everybody interested. Each sealer sees his representative, and in that way we are able to pass legislation with very little opposition. It seems to me, from the remarks that have been made, that there seems to be a necessity for an organization in order to produce the results we want to produce, and I move, Mr. Chairman, that we take steps toward the organization of a national body, composed of sealers of weights and measures of the various States, in order that we can have a national organization of this kind. I would leave it to the chair as to the methods of organization. We might appoint a committee to draw up a preliminary plan and adopt it to-morrow morning. But I make the motion.

The motion was seconded by Mr. Haskell.

The CHAIRMAN. It has been moved that steps be taken toward effecting a permanent organization.

Mr. PALMER. I understood several were to go away, and I thought perhaps we could appoint a subcommittee, and you probably had some idea. In fact, I suggest that you be chairman of the committee to adopt some method which the association, or such members as are here now or will be here to-morrow morning, could talk over and adopt at that time.

Dr. STRATTON. I would say that we had nothing at all in mind, except that we would like very much to continue these meetings. We would like to have the State officials meet here every year, and will leave the details of organization in your hands. It seems to me that it is very evident that we could bring about uniform State legislation, or National legislation. Some National legislation is necessary and also some State legislation. Furthermore, every State is entitled to the services of the Bureau. The Bureau can not go into the testing of weights and measures locally, although that might be handled by means of substations. We could, however, easily arrange some plan of cooperation and bring about whatever legislation is necessary. The Bureau should, of course, test the standards. I have sometimes thought that at the outset State arrangements for testing or sealing need not be provided. An efficient State inspector could see to it that the local officials were carrying out the law. He would inspect and supervise the work of the local officers and be the intermediary between the Bureau and the local authorities. There is no reason why every State should not handle this matter efficiently and without great expense. It would need in each State an official who has a respectable salary and who would be just as important as any other State official, and that this official should look after legislation in his State and see that the different counties or cities avail themselves of the services of this Bureau or of the State office of weights and measures where it exists. Something should be done at once. Remarkable as have been the statements made to-day we have not heard the worst, as there are States in which absolutely nothing is done and which are not represented here to-day.

Mr. BROWN. I presume it is the purpose of the mover of the resolution to include in this organization the sealers of weights and

measures, or other officers in the States charged with similar duties, together with the Bureau of Standards of the National Government.

Mr. PALMER. Yes, sir.

Mr. FISCHER. I would like to inquire as to the status of Mr. Haskell, as the District has a rather special relation to the National Government; but I suppose there is no question but that he would come in as a State officer.

Mr. HASKELL. Half of the expense of the office of sealer is paid by the General Government and half by the District. I am considered, however, as a District officer.

The motion for the appointment of a committee was then carried.

The committee appointed consisted of the chairman, Mr. D. C. V. Palmer, Mr. P. F. Hazen, Prof. L. G. Weld, Mr. W. H. Fowler, and Mr. L. A. Fischer.

Remarks of Mr. PERLEY F. HAZEN, representing the State of Vermont.

We all seem to be in about the same situation to-day in that we came here not knowing exactly what this meeting was for, and hence not prepared to make definite suggestions. I expect that in whatever we say we shall all wish recourse to the prayer book wherein we read: "We have said many things we ought not to have said, and have left unsaid many things we ought to have said."

I am in somewhat of an embarrassing position, not being a State sealer or a custodian of State or municipal weights and measures, but am connected with a corporation which manufactures such articles. When the invitation came to Vermont to send a delegate to this convention, the governor, evidently not knowing whom to send, asked if I would accept an appointment, to which an affirmative reply was made, and that is why I am here. As I say, I am in a somewhat embarrassing position, as any suggestions concerning the character of weighing machines or measures which should be employed might be construed as trying in a cheap way to advertise the business with which I am connected. I assure you, however, that this is furthest from my desire.

I do not think I am quite in sympathy with the work of this Bureau of Standards. Every section has its object of local pride, concerning which it can boast, and in northeastern Vermont it is its winter weather. With thermometers varying from 10 to 15 degrees, and some

cold-morning reports are received of the mercury registering from 35 to 50 degrees below zero, we of course always make use of the lowest record. It makes better headlines in the newspapers and causes more shivering on the part of those who read. I am afraid this standardizing bureau will do away with all that, and that we Vermonters will not get as much glory as heretofore.

But I assure you that I am heartily in sympathy with the subject which has been discussed and with all that has been said here to-day. The purchasing public is too much at the mercy of users of unreliable weighing machines and capacity measures, and of unscrupulous manipulators of even correct ones. The law in Vermont appears to be just about like that in other States, and is practically a dead letter. The state treasurer has the care of the standard weights and measures, furnished by the Government, of which we have heard to-day, and these are kept at the State capitol. This treasurer is the cashier of a bank, an excellent business man, and a thoroughgoing accountant; but of course he knows little, if anything, about weights and measures, nor is he expected to as a mere custodian of them. In his businesslike way, however, he not long ago asked us to send a man over to Montpelier and make a thorough examination of the weights and measures in his care and see what could be found out about them. The law also requires that each county shall be provided with duplicate sets of weights and measures, and also that each town should have similar sets. I have never seen any of these weights and measures, and do not know where they are nor of what they consist. You may think it surprising that in a State where two of the largest scale works in the United States, and probably in the world, are situated that interest in this matter should be so slight. The sale of scales, however, is not in Vermont. The amount sold there would not be a drop in the bucket in the business conducted. These goods are marketed all over the United States and in foreign countries; and so it is not surprising, after all, that the subject does not have any more attention right where the goods are manufactured than elsewhere.

There comes to us incidentally, as manufacturers, a knowledge of a great many tricks resorted to by dishonest people in the use of scales and measures. One which has not been mentioned here to-day is that of a carefully made weight. The user will balance up his scale with this weight, attached to the bottom of what is technically known as the "counterpoise"—that is, the part suspended from the small end of the beam to receive the sealed weights in the process of

weighing. When the load is placed upon the platform it is very easy for the operator, in handling the regular weights, to detach this weight from the counterpoise and slip it into his pocket. The scale will then, of course, indicate a greater load than is placed upon the platform, and the customer is thus cheated. And so there are any number of tricks that we hear about, although I have never personally seen any of them worked.

It is said that the United States post-office is twenty-five years behind the times in its methods. I am thinking that some of us who have been sitting here to-day have come to the conclusion that our system of inspection of weights and measures, after they get into the hands of users, is as much or more behind the times. We certainly need more efficient and stringent laws upon this subject. I might be able to make some suggestions of value in the compiling of data for the formulating of statutes, based upon our experience as manufacturers, but this is not the time or place to enter into a discussion of that phase of the subject. And so I will only add that I am heartily in sympathy with the taking of steps toward much-needed legislation for better protection of the purchasing public.

Dr. STRATTON. We are glad to have the practical experience of a manufacturer. Next year we hope to have exhibits of various instruments. It is a very important problem to determine what the sealer should have, and we must have the cooperation of the manufacturer. We never manufacture anything that can be bought in the market. We sometimes make weights and measures in order to try a plan, if we think we can improve them, but the moment we finish them they are given to the manufacturers. We have a very nice shop. There is none better, but we need the instrument makers for other work, experimental work, as it is not our plan to manufacture, but to cooperate with manufacturers.

JANUARY 17, 1905.

MEETING OF COMMITTEE ON ORGANIZATION.

Mr. FISCHER read a list of the States which had agreed to send delegates.

Mr. PALMER stated that he believed Maine and Connecticut would adopt whatever legislation was recommended.

After discussion, Mr. PALMER, on behalf of the Committee on Organization, presented the following resolution, which was adopted:

Resolved, That it is the sense of this convention that meetings of State sealers or custodians of weights and measures be held annually in Washington to discuss and facilitate both National and State legislation tending toward securing uniformity in the laws pertaining to weights and measures and their inspection throughout the United States, and the Bureau of Standards is requested to arrange such a meeting.

After discussing the matter of the next meeting it was decided that it should be held in October, unless something occurred to prevent it.

Mr. HAZEN presented a resolution, extending the thanks of the convention to Dr. Stratton and Mr. Fischer for their interest in calling the meeting and the courtesies extended those present.

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
WASHINGTON

SECOND ANNUAL CONFERENCE

OF

THE WEIGHTS AND MEASURES OF
THE UNITED STATES

HELD AT THE BUREAU OF STANDARDS
WASHINGTON
APRIL 12 AND 13, 1900



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DEPARTMENT OF COMMERCE AND LABOR

BUREAU OF STANDARDS

S. W. STRATTON, Director

SECOND ANNUAL CONFERENCE

ON

**THE WEIGHTS AND MEASURES OF
THE UNITED STATES**

HELD AT THE BUREAU OF STANDARDS

WASHINGTON, D. C.

APRIL 12 AND 13, 1906



**WASHINGTON
GOVERNMENT PRINTING OFFICE
1906**

LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF STANDARDS,
Washington, November 20, 1906.

SIR: I have the honor to submit herewith for publication a report of the proceedings of the Second Annual Conference on the Weights and Measures of the United States, held under the auspices of the Bureau of Standards, April 12 and 13, 1906.

The reasons which prompted the Bureau to arrange for regular conferences on the subject of weights and measures are set forth in a letter sent to the governors of the several States, the text of which is given below, to complete the record:

DEAR SIR: The second annual meeting of the State sealers of weights and measures will be held in Washington, D. C., on April 12, 1906, and it is earnestly requested that your State be represented. The object of these meetings, as stated in former communications to you, is to improve conditions affecting commercial weights and measures.

The functions of the Bureau of Standards include the construction and verification of State standard weights and measures, but the use of these standards for the regulation of commercial weights and measures is a function which has been largely left to the State and municipal authorities, and in the exercise of which the Bureau of Standards is ready to assist.

It is evident from the number of convictions for the use of dishonest weights and measures in localities where rigid inspection is maintained that the amount of fraud in States and cities where there is no inspection, or inefficient inspection, must be enormous; and, unfortunately, the loss usually falls upon those too poor or unintelligent to protect themselves.

The Bureau was led to take up this matter by the increasing number of inquiries received from the citizens of every State in regard to weights and measures matters which could only be properly attended to by local inspectors.

It is believed that the free interchange of views and experience will result in the passage of a Federal law applicable to all the States, or in the enactment of uniform laws by the separate States.

At the first meeting, held at the Bureau on January 16 and 17, 1905, facts were brought out which showed that almost all the States have laws concerning standards and commercial weights and measures, but only a few have made the necessary provisions for their enforcement. An examination of the proceedings of the first meeting, a copy of which is forwarded to you under separate cover, will show how little has been done in this direction and how much room there is for improvement.

It is earnestly requested that you inform the Bureau of what action is taken in the matter, and if a delegate is appointed that his address be furnished in order that he may be supplied with whatever literature we have on the subject of weights and measures.

All of the replies to the above indicated an appreciation of the importance of the subject and a cordial desire to cooperate actively in establishing a satisfactory system of inspection of trade weights and measures throughout the United States.

Respectfully,

S. W. STRATTON,
Director.

THE SECRETARY OF COMMERCE AND LABOR.

**DELEGATES APPOINTED TO ATTEND THE SECOND ANNUAL CONFERENCE ON WEIGHTS AND MEASURES,
APRIL 12 AND 13, 1906.**

WILLIAM A. BAYER,
Albuquerque, N. Mex.

ISAAC BROWN,
Secretary of Internal Affairs,
Harrisburg, Pa.

E. W. BURKE,
Evanston, Wyo.

JOSEPH L. CAHALL,
Secretary of State, and ex officio in charge
of the Standards,
Dover, Del.

A. F. CUMMINGS,
City Sealer of Weights and Measures,
Nashua, N. H.

LOUIS A. FISCHER,
Chief of the Weights and Measures Division,
Bureau of Standards,
Washington, D. C.

CHARLES M. FLOYD,
Member of Congress from Arkansas.

WILLIAM C. HASKELL,
District Sealer of Weights and Measures,
Washington, D. C.

PERLEY F. HAZEN,
St. Johnsbury, Vt.

J. R. KNOWLAND,
Member of Congress from California.

W. B. LAMAR,
Member of Congress from Florida.

C. J. NORWOOD,
State Superintendent of Mines, and Curator
of the Geological Bureau,
Lexington, Ky.

DANIEL C. V. PALMER,
Deputy State Sealer of Weights and Measures,
State House, Boston, Mass.

GEORGE H. PETTIS,
State Sealer of Weights and Measures,
Providence, R. I.

FRITZ REICHMANN,^a
Troy, N. Y.

JOHN W. RICHARDSON,
Register of the Land Office and ex officio
State Superintendent of Weights
and Measures,
Richmond, Va.

EDMUND D. ROBERTS,
City Sealer of Weights and Measures,
Hartford, Conn.

LEONARD S. SMITH,
Professor of Geodesy, University of Wisconsin,
and ex officio State Sealer of
Weights and Measures,
Madison, Wis.

S. W. STRATTON,
Director, Bureau of Standards,
Washington, D. C.

FRANK STRONG,
Chancellor of the State University and ex
officio State Sealer of Weights
and Measures,
Lawrence, Kans.

B. F. THOMAS,
Professor of Physics, Ohio State University,
and ex officio State Sealer of
Weights and Measures,
Columbus, Ohio.

A. L. P. WOOLF,
City Sealer of Weights and Measures,
Baltimore, Md.

A. N. YODER,
Secretary of State,
Helena, Mont.

^a Later appointed State Superintendent of Weights and Measures of New York.

REPORT OF THE SECOND CONFERENCE ON WEIGHTS AND MEASURES,

HELD AT THE BUREAU OF STANDARDS,
WASHINGTON, D. C., APRIL 12 AND 13, 1906.

APRIL 12, 1906.

Dr. STRATTON. It affords me very great pleasure, indeed, to welcome you again to the Bureau of Standards. Most of you know about the pleasant meeting we had last year. I notice a number of new faces, and we have also a number who were here last year, and I am sure we all remember the pleasure and interest in that meeting. It was worth the trip from the Pacific coast to hear and learn what our friends in Massachusetts were doing and what our friends in Virginia were not doing. We are going to hear more of these interesting stories this year.

Now, while the Bureau of Standards is very much interested in this work and inaugurated the movement, and while it is our duty to improve conditions affecting weights and measures, we believe that it will be better for you to perfect your own organization, elect your own officers, and carry on these annual meetings in a manner independent of the Bureau, just as any scientific organization would. The first thing in order, therefore, will be the perfecting of the organization. I would suggest that this be made the first business of the meeting. After that I would be pleased to say a few words in regard to uniform laws and some other matters in connection with our work. This will not be formal, but merely with a view to bringing up points that should be discussed during the meeting. To-morrow morning we hope to have with us Mr. Southard, the chairman of the Committee on Coinage, Weights, and Measures of the House of Representatives, and Representative Littauer, who is also greatly interested in matters pertaining to weights and measures.

Remarks on the proposition to form a permanent organization are now in order.

Mr. RICHARDSON. Mr. Chairman, before we proceed in that matter I would like to have your opinion of the number and character of offices there should be in this organization.

Dr. STRATTON. I think we should have a chairman and a secretary. The organization should be as simple as possible.

Mr. RICHARDSON. I think so, myself. I think it would be very well to have a chairman, a secretary, and an advisory board of from three to five to act with them.

Mr. FISCHER. Would not the work of the committee mentioned be taken care of by committees which might be appointed to consider special questions as they come up?

Mr. RICHARDSON. My idea was that a board of three would take the place of all the committees.

Mr. FISCHER. I merely suggested that as one way in which special matters might be handled to greater advantage than they would be if a single committee had to consider every question.

Mr. RICHARDSON. I suppose the prime object of this meeting is to get at uniform laws for all States in the Union.

Dr. STRATTON. Not only uniform laws but uniform methods of inspection.

Mr. RICHARDSON. Would it not also be wise to petition Congress to pass uniform laws, and make suggestions to them as to what we would like.

Dr. STRATTON. Personally I am of the opinion that it would be a good plan.

Mr. PETTIS. Make the organization as simple as possible; have as few officers as we can get along with. I think it is only necessary to have a secretary and a chairman. I move you, sir, that Dr. S. W. Stratton be made the chairman of this meeting.

Dr. STRATTON. I hope that motion will not be seconded. I think it much better to select one of the State representatives.

Mr. NORWOOD. I second the motion. I think Dr. Stratton is the man to be chairman of the meeting.

Mr. HAZEN. Well, we can find that out by a vote.

Dr. STRATTON. Do I understand that this motion is to provide for a chairman of this meeting and that you will elect a chairman at each meeting?

Mr. NORWOOD. I understood that it was to be a chairman of the association. I presume, Mr. Chairman, the first thing for us to do is to agree to form an association, or has that already been done?

Dr. STRATTON. No, sir.

Mr. NORWOOD. I move that a permanent organization be formed. I do not know what it should be called.

Mr. RICHARDSON. I would suggest that it be called the National Sealers' Association.

Dr. STRATTON. I think at the meeting last year the sentiment was in favor of a permanent organization, but if I remember correctly no details were discuss.

Mr. FISCHER. Yes, that is correct; a resolution was adopted at the last meeting which favored annual meetings.

Mr. NORWOOD. We all agree that there should be a national organization formed. The question of a name can be settled later.

Mr. NORWOOD. We have no State sealer in our State and really I am not the proper person to be here. I find on looking thru the documents I received and read yesterday, for the first time, that in Kentucky the secretary of state is the custodian of weights and measures. I doubt, however, if the secretary himself knows that he is the custodian, but he is really the one who ought to be here, and represent our State in such an organization.

Dr. STRATTON. I would like to say to the gentleman from Kentucky that he need not feel out of place, as most of the States are in the same position. We shall probably have representatives from many States who are not technical men and yet are very much interested in the subject, and are perhaps the best men to secure the needed reforms. I think that eventually the representative from the States should be a technical man, but that is entirely out of the question at present and the other class of men is perhaps better at this time.

Mr. PETTIS. My motion was that we should elect first a chairman and a secretary, and then proceed to business.

Dr. STRATTON. The motion is that we will proceed to elect a chairman and a secretary, and if there are no objections I shall assume that the motion is agreed to. Nominations for a permanent chairman are now in order.

Mr. PETTIS. I suggest, Mr. Chairman, that Mr. Fischer be made permanent secretary.

Mr. NORWOOD. I understood that the chairman had already been nominated.

Dr. STRATTON. I had hoped, gentlemen, that you would select one of your own number as chairman, but I think Mr. Fischer would make a very good secretary.

Mr. RICHARDSON. If you will allow me to say a word, I think the work of this organization largely centers in the Bureau of Standards,

and if you elect some one from Kentucky, Connecticut, Ohio, or Rhode Island as chairman and a secretary who has his residence at Washington the arrangement will not be a convenient one. The secretary has to confer with the chairman at all times, and I think it is best to have the head of the Bureau of Standards as chairman and the chief of the weights and measures division of the Bureau as secretary, and then the work can be conveniently done.

Mr. REICHMANN. I think the best scheme is to have a chairman, a secretary, and an executive committee composed of the sealers of the different States. Then the work will devolve upon the executive committee, but at the same time the Bureau of Standards would be identified with it as it should be.

Mr. HAZEN. I think we all agree that the Bureau of Standards should take the lead in this work, and I therefore call for a vote on the nomination of Dr. Stratton. All those in favor of the election of Dr. Stratton as chairman of the association will say aye. The ayes have it. You are elected, Dr. Stratton.

Mr. RICHARDSON. I second the nomination of Mr. Fischer as secretary of the association.

Dr. STRATTON. All those in favor of the election of Mr. Fischer as secretary will please say aye. The ayes have it. Mr. Fischer is elected.

Mr. PALMER. I move that we now elect an executive committee of three. The motion was agreed to.

Mr. REICHMANN. I would like to nominate as the first member of that committee Mr. Palmer, of Massachusetts.

Mr. PETTIS. It seems to me that this power ought to be vested in the chairman of the organization. It might be well to elect them this time, but it seems to me that in the future the committee should be appointed by the chairman.

Mr. RICHARDSON. If the gentleman who made the motion to elect the executive committee will withdraw his motion I will make a motion that the committee be appointed by the chairman of the organization. That is the usual procedure.

Mr. PALMER. I will then withdraw my motion.

Mr. RICHARDSON. I move that an executive committee be appointed by the chair. The motion was seconded by Dr. Reichmann and was carried.

Dr. STRATTON. Shall the committee be appointed now or later?

Mr. PALMER. Just as you suggest.

Dr. STRATTON. I appoint Messrs. Palmer, Thomas, and Pettis.

Mr. THOMAS. I am perfectly willing to do anything in my power to further the object of this organization, but with all deference to the wishes of the chair in the matter I think there are other members of the association who are better able to render effective service than I am; a copy of last year's report which I received indicates that there are a number of men who are doing a great deal of work in carrying out the regulations pertaining to weights and measures, while, unfortunately, on account of the State laws in Ohio being insufficient we have not been able to make much show in regard to weights and measures matters. I think there are sealers here whose attention has been directed more to the subject and who have had considerably more experience with this matter than I have.

Dr. STRATTON. I think, Mr. Thomas, Ohio is one of the few States that have made a step in the right direction. I think you would be the right man on the committee and I hope you will consent to serve.

Mr. PALMER. It is well to find out how many States are represented here and I would request that the roll of States be called.

Dr. STRATTON. Will the secretary please call the roll?

The following delegates responded to the roll call:

WILLIAM A. BAYER, New Mexico.

A. F. CUMMINGS, New Hampshire.

P. F. HAZEN, Vermont.

C. J. NORWOOD, Kentucky.

DANIEL C. V. PALMER, Massachusetts.

GEO. H. PETTIS, Rhode Island.

F. REICHMANN, New York.

JOHN W. RICHARDSON, Virginia.

B. F. THOMAS, Ohio.

A. L. WOOLF, Maryland.

Mr. FISCHER. Mr. Haskell, sealer of the District of Columbia, just telephoned that he had not received notice of the meeting until this morning, but that he would be present to-morrow. We also have a letter from Professor Strong, who was to have represented Kansas, stating that he has recently recovered from a severe illness, and regretted his inability to be present. Mr. Roberts, the delegate from Connecticut, Mr. Brown, of Pennsylvania, and Mr. Cahall, secretary of the State of Delaware, wrote that they would be here, but they have not yet arrived.

Representatives were appointed by the governors of Wisconsin and Iowa, but no provision was made by either State to defray expenses and we have been informed that it is unlikely that either State will be

represented here. Wyoming and Montana appointed delegates, but we have not heard from them. The governors of Arkansas, California, and Florida appointed their representatives in Congress, but as this is a very busy time at the Capitol it is improbable that any of the gentlemen named will attend. Altogether twenty-two States or Territories appointed representatives, and in almost every case our notices of the meeting to the governors elicited replies which favored the movement.

Mr. PALMER. I saw Mr. Roberts, the State sealer of Connecticut, at Hartford a few days ago and he was in very poor health. He has been the sealer of weights and measures in Hartford for more than thirty years. He would be a very valuable man for us to have with us, and I did my best to persuade him to come to Washington.

The CHAIRMAN. I think we shall probably have a few more delegates here to-morrow morning.

Mr. PALMER. I would like to offer a suggestion. There are a number here who were here last year, and the different delegates can get an idea of the condition of matters pertaining to weights and measures in our States by reading the report of the meeting held last year. There are several here who were not here last year, and there are several new States represented. It would be interesting to know what is done in those States.

The CHAIRMAN. I think it would be a good feature to have a report from the delegates at every meeting.

Mr. PALMER. I think we should have this meeting reported and gotten out the same as the meeting last year. But I do not know whether we could have the proceedings printed again as they were last year. I would be willing to help create a fund for the purpose of printing the reports of these meetings if that is necessary.

The CHAIRMAN. We had some difficulty in getting the report printed last year, but the matter was finally arranged satisfactorily.

Mr. RICHARDSON. I think it would be a good idea for us who were here last year to hear from the new delegates who have come in, and to-morrow we can take up other matters of executive nature. I would like to hear from the delegate from Rhode Island regarding conditions in his State.

Mr. PETTIS. I was not here last year; I had just come out of the hospital two days before the meeting was held. It was one of the disappointments of my life, as my every energy is in this business of sealing. Back in 1653 or 1654 the people of Newport sent a Mr. John Clark to Boston to get proper weights, so that the weights which were

in use by the storekeepers could be tested and made correct. In Rhode Island the inspection of trade weights and measures has been kept up, next to Massachusetts, or perhaps as well. Mr. Palmer is well acquainted there, as he comes to our town once in a while and knows how we do business. Our State is small. There are no counties in it.

Mr. RICHARDSON. Your State is just one big county.

Mr. PETTIS. Just about. As I said, I think we have this work in very good shape. Massachusetts is in fine shape, although it is a much larger State. We are interested to have other States take hold of this thing and get where they belong. I was raised at Cohoes, in New York State, about 9 miles above Albany, and have always had a great interest in the State. In January, when my annual report was published, I sent a copy to every official who would be liable to be interested in it. I sent one to the State sealer, or custodian, of the State of New York. I was ambitious that New York might become aroused and interested and take up the matter, just as has been done by Massachusetts and Rhode Island, and my purpose is to do all I can to push this matter forward. We will make a good start at this meeting and get some of the States on the way of doing the thing right. That is all I have got to say.

Mr. RICHARDSON. Before the gentleman sits down I would like to ask on what particular line he has the most trouble in keeping the people straight on weights and measures.

Mr. PETTIS. With the peddlers. In any State you will find the merchants—the people who are in regular business and who have a permanent habitation—are generally honest and anxious to have their scales correct, and are willing to pay to have them tested, but we do have trouble with the peddlers with their sliding scales and the hucksters with their fraudulent dry measures.

Mr. RICHARDSON. How often do you find it necessary to seal them?

Mr. PETTIS. Once a year all small scales are tested, and twice a year all wagon scales are tested and sealed.

Mr. RICHARDSON. The people of your State then have more incentive to be honest than mine have. The weights in Virginia are only sealed every ten years.

Mr. PETTIS. I shall say more on that matter at the meeting to-morrow.

Mr. NORWOOD. I come from a State where speakers are supposed to live. I, unfortunately, am not one myself and so I have no reputation to sustain. As I mentioned before, I myself am not a sealer and I suppose that technically I should not be here. The secretary of my

State, who is the custodian of the weights and measures that were given to the State by Congress many years ago, should be here. I do not suppose there is any State in the Union that is in a more chaotic condition about weights and measures than Kentucky, so far as laws are concerned and so far as inspections are concerned. The volume that was compiled last year by the Bureau of Standards, which I have been reading, contains about all the law in Kentucky on the subject, and any of you gentlemen who will look at it will see that it amounts to nothing. There is no law that I am aware of—and I believe I would know of it if it were there—that compels anyone to have his scales or his measures sealed. It is rather a privilege that anyone has to ask a sealer to come and examine his scales and weights. I think that is the law. I will frankly say that I am ignorant on this subject, how ignorant I did not know until I read this pamphlet of your proceedings of last year. I read it yesterday, and I really did not know how little I knew on this subject.

I was one of the early members of the Metrological Society, an association formed in the seventies. I dropt out of it after a while because at that time I was not a decimal man, or didn't think I was a metric man. Altho, as I said, I was one of the early members of that society, I never realized how important this subject was until I read this document—your proceedings of last year. I came here at the request of the governor of Kentucky. I happen to be somewhat of a Pooh Bah in my State. I hold two or three offices. I am the head of the geological survey, head of the Mine and Engineering School, State College, and also State inspector of mines, and when anything like this comes up the governor thinks I am the only man to look after it and as I had other business in Washington, that explains why I am here now. I am very glad that I am here. I came here to learn, because I am anxious to go back to Kentucky having learned all I can from you gentlemen and the proceedings and try to get the State interested in this subject, for I see its importance. The State inspector of mines, since I come to think of it, may be a brother-in-law of the State sealer. Their spheres must touch somewhere, for the reason that our legislature, which recently adjourned, provided that in cases of disagreement between coal operators and their miners as to the condition of the scales upon which the coal is weighed, that these differences should be submitted to the chief inspector of mines, and he, either in person or by one of his assistants, should examine the scales in question and require that they be put in accurate condition if they are incorrect.

I do not remember the exact language of the act, but there is a tolerance allowed for the scales. If they do not show any greater error than is permitted in similar scales of standard make—and I want to learn from the sealers here what that tolerance is—they should be approved. But, as I said, things are in a chaotic condition in our State as far as laws are concerned. We have no sets of standard weights and measures—that is, no British standards. The first set that was supplied to the State by the Federal Government is believed to have disappeared during the war; at any rate, it is lost now. It so happens that I have tried to find it. We have, so far as I can ascertain, only the set of measures of length of the metric system that was supplied a few years ago, but I do not think we have the standards of capacity. I think they are gone, and one of the things the governor's secretary said to me over the 'phone was, to be sure and get two sets of the standards, one of the old system and one of the metric system. I presume that I will be able to report that if the State will supply the money we can get another set, but I would really like to know, and I think it would be an important thing for the association to ascertain, what States need new sets, and then possibly we might induce Congress to provide them. I think it would be difficult to induce our State to buy a set unless we can get up a sentiment in Kentucky for better conditions. If a sufficient number of States have lost their standards, it seems to me we might possibly, thru Congress, get new standards supplied to those States. Are they very expensive, Dr. Stratton?

The CHAIRMAN. No.

Mr. NORWOOD. I understand there is a question as to whether the standards that were supplied to the States would conform to the standards here. They are off a small fraction, say, your yard is a little bit shorter or longer, and it might be that we could get new sets if all the States would try. We need all the help we can get. I believe I have said all there is to be said about Kentucky; there isn't very much. I think I have perhaps said a great deal more than I should.

Mr. RICHARDSON. Before you sit down. You have said a great deal about weights, can't you say something about measures, liquid measures?

Mr. NORWOOD. There is one thing perhaps I might tell which would be worthy of mention. This law which you have seen in the book there does provide for a county sealer. One of the absurdities that was proposed in some legislation last winter referred to a county

sealer. I doubt whether there is a county sealer in Kentucky. I have never been able to find one. There may be two sealers in Kentucky, one at Covington and one at Lexington. They had a sealer in Louisville. I remember reading of a raid he made on the market men.

Mr. RICHARDSON. He was controlled by the city authorities?

Mr. NORWOOD. Yes. He was created by the city authorities four years ago or perhaps six years ago, and I remember that he made a raid on the market people and found a great many frauds, particularly with respect to strawberry baskets or boxes. I remember someone last year speaking of this thing, but I am not sure that that office is now in existence in Louisville. I remember that within the last two years strong efforts were made to abolish the office. It was not satisfactory to some of the people in control of things. We need a great deal of education on this subject in Kentucky, gentlemen. There is one thing more I would like to say, because I may not be here at the meeting to-morrow. I would like to see uniformity in what constitutes a bushel of a certain commodity in the different States. I don't think there is any such uniformity. I believe our recent legislature past a law regulating the number of pounds of beans in a bushel and the number of pounds of corn in a bushel. I would like to feel that if I were to buy a bushel of grain in one State I would receive the same number of pounds as I would in Kentucky. I should like to see that uniformity thruout States, and anything that can be done to bring that about I should like to aid.

Mr. RICHARDSON. A bushel of corn in Virginia is 70 pounds in the ear and 56 pounds shelled.

Mr. NORWOOD. It depends on what time of the year you take the corn as to what a bushel would weigh.

The CHAIRMAN. I want to say to Mr. Norwood that the question of supplying the new States with standards and replacing some that have been destroyed in the older States is one that we have been considering for the last two or three years. It has come up frequently. We are just on the point of including that expense in our estimates for the coming year. I think it should be included, and I think that there will be no difficulty in getting Congress to make an appropriation for new sets.

Mr. RICHARDSON. Do you think there would be any likelihood of giving old parts in part payment for the new ones?

The CHAIRMAN. Your sets are good as far as they go. We would like to hear from the gentleman from Maryland.

Mr. WOOLF. I have very little to say, as I came over here to learn. The conditions in Maryland are about the same as in Kentucky, except that in Baltimore there is some sort of inspection. Otherwise the laws are not carried out in the counties. I don't know anything else I can say that would be of interest.

The CHAIRMAN. Now we will listen to the gentleman from Massachusetts, Mr. Palmer.

Mr. PALMER. I always do have a good deal to say, as I am greatly interested in weights and measures. In Massachusetts the State treasurer is ex officio sealer of weights and measures. It seems to me that the delegates who are here from States where no supervision of weights and measures is made should make a report to their governors, calling attention to the fact that other States provide for the supervision of commercial weights and measures, and that their own States have practically no inspection, with the result that the public is at the mercy of unscrupulous dealers and the people are victims of false weights and measures at any and all times during the year. I believe that their governors would take a great interest and would probably call the attention of their legislatures to the matter. That would accomplish a great deal along the lines of effective weights and measures inspection in the different States.

Probably a great many of you are familiar with our laws in Massachusetts. They are about the same as when I was here last year, with the single exception that we have one amendment allowing prosecution in cases where we seize false scales and balances—i. e., that the possession of false scales and balances shall be prima facie evidence that they were to be used for the sale of commodities. Previously in case a seizure was made we had to prove a sale except in the case of measures. In this case we could prosecute. We have taken up the subject quite thoroly in Massachusetts. I think if I could have you all up there and show you the amount of false weights and measures we unearthed by inspection you would be surprized. We have been making some attempt at strict prosecution in our large cities, and it would be amazing if you knew the amount of money that is lost in our cities and towns thru the use of false weights and measures every year.

On my return from the convention last year I stopt at New York City and called on the city sealer, Mr. Derry. At his suggestion I spent a day and a half with him and took ten of his deputies among the stores, showing them methods of inspection of weights and measures. I remember of going into one of the largest stores on Sixth

avenue, where we tested the yard sticks in use and found many of them from 33 to 36 inches in length. It was a very rare case where we found a yard stick which exceeded 36 inches. An abstract of Mr. Derry's report has appeared in the public press, and during a recent conversation with Mr. Derry he told me that the prosecuting attorney had received over 150 cases for prosecution during the quarter. Now, these are the cases that the inspectors of weights and measures discover when making tests with their small testing outfit and they do not include inspection of large scales. I know that Mr. Derry would be glad to send any of you a copy of his report, and that you would be very much interested in it. New York has had no State officer who takes an interest in weights and measures, but I trust that before long there will be some change in that department, for there is a big field for an efficient officer.

We have no law in Massachusetts which compels the use of a standard package. I recently investigated the dealers in creamery butter, and found they were putting butter up in what are called "prints." I only found one instance where the print weighed full 16 ounces. Some I found as light as 14 ounces. Upon further investigation I found that these prints were supplied by the creameries in the country, and that the dealers were losing as well. They were selling the article in good faith, the matter never having been brought to their attention before. No prosecution could be made. The only way we would have prosecuted under the law would have been by charging that they were obtaining money under false pretenses. We finally decided to give the facts to the public press, and within twenty-four hours everyone who bought butter made certain that he was getting 16 ounces for a pound. The creamery people were also informed that they would be prosecuted if they did not comply with the law.

One of the particular things that will have to come up before these meetings sooner or later is the question of uniform packages. There should be some national legislation in regard to that, or at least uniform legislation by the States. The farmers of Maryland and Virginia ship into the Boston markets short barrels of sweet potatoes, altho we have a law which requires that potato barrels shall contain so many pounds. I am a firm believer in the packing of such articles as crackers, etc., where they are made, but it seems to me that some statement as to the weight should be placed on all packages, otherwise the full weight is not given even if the packing is included. Such legislation would be fair to the manufacturers and at the same time the public would be protected. Certainly the public should have

some redress when it is deliberately sold 14 ounces for 16 ounces. I could go on talking about conditions in Massachusetts the rest of the afternoon, but I want to know about the conditions in the other States.

I will be glad to answer questions at any time, and I hope the delegates at this meeting will take an interest and do everything to bring the matter to the attention of their governors by making written reports to them. Report that the people are absolutely at the mercy of unscrupulous dealers unless a thoro inspection is made. I believe that conditions are no different in the States of Virginia and Ohio than they were in Massachusetts before we had inspection, and I know it exists there yet, despite all we have done, and it must exist in a larger degree where no attention is paid to it. I have at home many examples of incorrect scales which were found in use and seized. I hope the delegates who are here will not let this matter drop, but will perfect a national organization and have a State supervision of every city in every State of the Union before we get thru.

The CHAIRMAN. I have taken up the question of national legislation with some Congressmen recently, but there is always an uncertainty as to what subjects may be covered by national legislation. I asked Mr. Southard, chairman of the Committee on Coinage, Weights, and Measures, to meet with us—in fact he should have been here this afternoon to talk to us in regard to this matter. It is generally felt by Members of Congress that such matters can not be covered by national legislation unless it is in connection with the collection of duties and revenues. You may be interested to know that the pure-food bill, which is now being considered, contains a provision for the marking of packages. An amendment was offered by Mr. Mann, of Illinois, which provides that all package goods be marked to show the weight. I do not know if it is a subject for national legislation, but every Member that I have talked with in regard to the question is of the opinion that it ought to be covered by national legislation if possible. It is one of the most important things, I think, we can discuss. I hope that the time is not far distant when it will be a misdemeanor to misrepresent the quantity or quality of any article offered for sale to the public.

Mr. CUMMINGS. I am here as a representative from the State of New Hampshire, at the request of Governor McLane. At the present time I am sealer of weights and measures for the city of Nashua.

The State treasurer is custodian of the State standards of weights and measures, and by them tests and proves all scale beams, weights, and measures brought to him for that purpose. Each county has a

sealer appointed by the governor; also the cities and towns have sealers selected by their local governments or appointed by the selectmen. The standards of the county sealer are, once in three years, required to be tested by the State standards, while those of the city and town sealers are required to be tested as often by the county sealer. The city and town sealers are required, once in each year, within three months after the 1st of April, to examine all scales and measures used in the buying or selling of any goods or commodities.

The State treasurer and county sealer receive 10 cents and the city and town sealers 25 cents for each steelyard, scale, or scalebeam, and 10 cents for each measure examined and sealed, excepting where more than five scales or measures belonging to one person or firm are sealed, in which case the fee is one-half of that sum for each additional scale or measure. In many instances the fees charged by the sealers have not been in accordance with the law, different sealers having different prices. Especially in the testing and sealing of railroad and street scales the fee of 25 cents was not considered proper compensation, and charges of \$3 have been made for this class of scales, and in case of portable platform scales fees of from 50 cents to \$1 have been charged. This sliding scale of fees caused much dissatisfaction among the merchants, and the matter was referred to the board of trade and the law was published in the local papers for the benefit of those not conversant with it.

In my rounds of last year I had very little trouble with the dealers, and all seemed satisfied with the fees charged, altho they considered that it belonged to the city to pay the charges rather than to the individual merchants.

In some respects the present law is a farce, as a scale is very easily adjusted to weigh as many ounces to the pound, or the proportionate part thereof, as the dealer is inclined to give, and twelve months may elapse before another test will be made. I have no doubt there are those who make up in this way the amount of the fees paid the sealer. The law reads that any person buying or selling merchandise by scales or measures which have not been sealed, or who shall buy or sell any commodity by any scale or measure which has been sealed but is not correct, shall be fined \$10 for each offense. Few complaints or prosecutions have ever been made, to my knowledge. All scales, after being tested, are labeled "Approved" or "Disapproved," with the date and sealer's name attached. I can make few suggestions, as I am a new man in the business, but came here to listen to suggestions, and will report them to the governor, who will, without doubt, be ready to

unite with the other States in securing uniformity of laws concerning weights and measures, whereby the people of our State will be benefited.

Mr. RICHARDSON. Allow me, what method do you use in testing hay scales?

Mr. CUMMINGS. I have a set of copper measures for liquids, iron measures for dry measures, and 10, 25, and 50 pound iron weights for scales. When I test hay scales I use forty of the 50-pound weights, testing each corner separately, and if all bearings are correct the scales are approved.

Mr. RICHARDSON. You take these weights with you?

Mr. CUMMINGS. I usually make three rounds of the city, starting out with the light testing weights for light scales, then take the medium scales, with weight of 500 pounds, and last with a ton of weights for scales of large capacity.

Mr. RICHARDSON. Do you test drug-store scales?

Mr. CUMMINGS. Yes, sir.

Mr. RICHARDSON. Do you have a means of impressing your seal on the scales to show that you have made the test?

Mr. CUMMINGS. I attach a label stating that the scales have been tested and found correct with the date and my signature.

Mr. RICHARDSON. I thought I understood you to say that you test every three years.

Mr. CUMMINGS. No, sir. The standards I use are required to be tested every three years by the county sealer, but I make a test of all city scales once a year.

Mr. RICHARDSON. You are not the State sealer?

Mr. CUMMINGS. No, sir; a city sealer.

Mr. RICHARDSON. You are not amenable to the State authorities?

Mr. CUMMINGS. No, sir; I am under the county sealer and he is under the State sealer.

Mr. RICHARDSON. Do these lables attached to the scales remain on?

Mr. CUMMINGS. I find most of them on.

Mr. RICHARDSON. Do you have any penalty for their removal?

Mr. CUMMINGS. No, sir. That is not covered by our law.

Mr. RICHARDSON. It ought to be.

Mr. FISCHER. How much of your time does it take?

Mr. CUMMINGS. About six weeks.

Mr. PALMER. You are paid by salary or fees?

Mr. CUMMINGS. Fees.

Mr. PALMER. You collect all fees?

Mr. CUMMINGS. Yes, sir.

Mr. PALMER. And make a return to the city?

Mr. CUMMINGS. All fees are retained by the sealer and a report made to the city.

Mr. RICHARDSON. The city authorities fix the fees, or do you fix them?

Mr. CUMMINGS. They are fixt by law.

Mr. NORWOOD. The seal you place on the scale, is that something pasted on?

Mr. CUMMINGS. Yes, sir.

Mr. NORWOOD. It is not of any particular value if it does not stay on?

Mr. CUMMINGS. I have a record of every scale sealed in the city, and if any question comes up I can easily look up and see if the scale has been tested.

Mr. PETTIS. Suppose you condemn scales that may be repaired. How do you indicate that?

Mr. CUMMINGS. I disapprove or condemn them and notify the party of the repairs required, and as soon as they are made I make a new test.

Mr. NORWOOD. I should think there ought to be some way of indicating the state of scales which are out of order, so that the dealer could not use them.

Mr. CUMMINGS. It would be well. When disapproved scales are found attention is called to the law in regard to the penalties attached for using them.

Mr. NORWOOD. But you have no way of indicating that you have condemned it?

Mr. CUMMINGS. No, sir; only by notification to the party using them. I am paid to test and seal scales that are correct and disapprove those that are not; that is my duty according to our law. A party could adjust his scales to weigh 14 ounces for a pound after I had gone and my record would show that they were correct when the test was made.

Mr. RICHARDSON. Well, they were when you left them?

Mr. CUMMINGS. Yes, sir.

Mr. PETTIS. In Rhode Island if a measure is incorrect and can not be made correct we knock the bottom out of it. I understood you to say you disapproved of these dry measures and gave them back. We do not allow them to be used; we break them up.

Mr. CUMMINGS. I have no authority to destroy them, altho in many instances I take them away if I believe the owner is likely to use them again.

Mr. RICHARDSON. Mr. Cummings, when you come across an iron or brass weight used on balances, if it is either too heavy or too light, how do you handle it?

Mr. CUMMINGS. I disapprove of the weight, as in the case of scales, and usually at the request of the parties properly adjust them by drilling and plugging with lead. For such service I charge in accordance to the time it takes in making the adjustment. I think the State of New Hampshire would welcome any law that would lead to uniformity in regard to the sealing of weights and measures, and also one that would aid in the conviction of short weight and measure merchants. I know they would be glad to welcome such an improvement.

Mr. BAYER. You increase the weight, then, by plugging with lead, and decrease the weight by boring when it is too heavy?

Mr. RICHARDSON. They do not usually show error by being too heavy.

Mr. PALMER. In Massachusetts, the sealer of weights and measures has the right to adjust with such means as he has at hand, for which he is allowed a fair and reasonable compensation. For this purpose he is supplied with a kit of tools which you have probably seen.

The CHAIRMAN. An outfit is on exhibit downstairs in the rooms of the weights and measures division.

Mr. PALMER. This kit contains a number of tools which the sealers have devised for such purposes as straightening needles on spring balances, etc. The sealers of Massachusetts seize, practically, everything they condemn, and I doubt the efficiency of the condemned label method.

Mr. RICHARDSON. How do you mark glass bottles?

Mr. PALMER. With a marking acid, some times called "diamond fluid." We have discontinued using the diamond for marking the glass, as it breaks more easily where cut with the diamond. Condemned bottles, after being marked, are returned to the owners, as they have a value and can be used for other purposes. Many are shipped to New York City or Albany and other places where there is no inspection. Not long ago some condemned bottles were returned to the owners, who attempted to remove the mark and place them on the market as correct bottles, but we were able to identify them. However, measures are usually marked with a large marking stamp with the word "condemned" lettered in full, so that it is very easy for the

sealer to discover if they are used again. Scales or other apparatus which can be made to conform to standard are tagged. The tag contains a printed abstract of the law which states the penalty for removing the tag and the penalty for using false weights and measures. In some instances it is pasted on or attached with a lead seal so that the scale can not be used without breaking the seal. The scales may be repaired and again submitted to the sealer, who removes the seal if the scale is correct.

One of the principal things we have to contend with in Massachusetts was touched upon by Mr. Cummings, and that is the practise of charging fees. Unfortunately we still charge fees because they are prescribed by the statutes, and there is more trouble from this source than from any other. I hope some day to have this practise abolished. Under the fee system the sealer has no incentive to inspect scales, etc., but once during the year, as no fees can be collected for a second examination. If a sealer were provided with a salary, he could then go at any time he saw fit to inspect any scales or measures. As long as fees are charged these conditions will exist, and I trust that if anybody here has anything to do with the recommending of legislation, that he will eliminate fees if he can.

Mr. RICHARDSON. You believe that the sealer should be paid a stated salary?

Mr. PALMER. Yes. A large proportion of them are now paid by salary in Massachusetts. I have probably been before twenty-five different boards of aldermen and selectmen within the last year to advocate this method of compensation.

Going thru the District market this morning I lookt at the scales which Mr. Haskell had tested. In many cases it was difficult to see the seal on them. If you will inspect these scales you will see that he has a wire with a lead seal attached. As I have previously stated, this method is used by some sealers, but I recommend a paper seal such as Mr. Pettis has shown, on account of its educational value. When I planned our new seal, with Mr. Reichmann, I had placed on the tag a statement to the effect that the seal must not be removed or defaced, and anyone standing in front of scale is bound to see it. The seal is therefore an indication to the public that the scale is in good order.

Mr. REICHMANN. Everybody will see a paper seal and curiosity leads him to read it.

Mr. PALMER. Every weight used in connection with a scale is sealed as an individual weight. It is marked with the initial letter of the city, in the case of Boston it is a "B" and number "06" to indicate

the year. I am inspector and prosecuting officer for the whole State, and I can, at any time and place, inspect trade weights and measures and if they are not correct I can prosecute.

Mr. THOMAS. I can readily understand that a man would be very anxious to so preserve any seal on his scales or measures stating that they are O. K. But what I am trying to get at is what is done when you condemn scales.

Mr. PALMER. We always use a paper tag. There is a penalty for removing it, and the sealer keeps a record, in a sealer's record or receipt book. The firm of W. and L. E. Gurley is supplying for our use apparatus of all kinds, and they have gone to great expense to prepare the same.

At present we issue two identical receipts, except that one is white and the other is yellow. Both are numbered the same and contain the same printed matter. The copy is manifolded by the use of carbon paper, and one is torn out and given to the owner of the scale and the other is kept by the sealer in his record book, so that at all times he has a duplicate or autograph copy of the receipt issued.

The CHAIRMAN. We will now hear from Mr. Reichmann, representing the State of New York.

Mr. REICHMANN. Mr. Chairman and gentlemen of the convention, Dr. BOSS, of the Dudley Observatory, Albany, N. Y., is State sealer of New York. His duties as astronomer have been so great since he received the grant from the Carnegie Institution that he did not have time to come to the convention and urged me to represent the State, which I agreed to do. The conditions in New York State are chaotic in most places, except in the city of New York, where there has been considerable improvement in the last four or five years, particularly during the last year—I think largely due to the interview which Mr. Palmer had with Mr. Patrick Derry on his return from this convention last year. Mr. Derry gave me a copy of his report for last year, which gives the number of seizures, convictions, etc. But the thing that strikes me as the most interesting part of his report, and also of his report of the first quarter, is that, out of 600 seizures made for false weights the first year, when those places were visited the next year only 23 cases of false weights and measures were found. We have here a good indication of what the sealing has done in New York.

I think the same effect will follow in all cases where the sealing of weights and measures is organized, and inspection is thoroly and systematically done. It will tend in a very short time to mitigate the evil to such an extent that the second or third, or at latest the seventh

or tenth, year the inspection will become a very simple matter, because the public will have been educated. Mr. Derry has encountered considerable difficulty. In one of the largest stores in New York he had to send police with two inspectors for protection, because the manager refused them permission to enter the store, but they convicted him on three counts—three false yard measures. In a number of the East Side districts in New York City clerks in small grocery stores and also in butcher shops are paid no salary at all. What they get at the end of the week is the amount they have cheated the public out of. In other words, the stock of meat is carefully weighed by the proprietor, then each clerk as he makes a sale hands in a slip with the weight and price to the cashier. In the evening the slips for each clerk are added up. From the total weight is deducted the original weight of the meat, the excess is the profit of the clerk. The result is that the clerk always throws his meat on the scale and reads it as it reaches the bottom point.

On spring balances you might put a pound weight on that way and make it read a pound and a half, so that the man who buys a pound pays for a pound and a half. There are many ways in which people can be defrauded by weights and measures. I am making an interesting collection of "snide" weights and measures, and I had hoped to bring down to the convention a whole case of them. I have one "spring" balance which I bought for \$2, worth about 10 cents to the junk dealer. It had no spring in it. The spring had been removed completely. The pointer was attached to a wire in such a manner that it could be moved up and down at the will of the operator. With this device one could weigh anything, the amount indicated depending upon the skill and will of the merchant using it. I have also fraudulent half-peck measures, and milk bottles.

I wish to correct one remark made by Mr. Palmer, namely, that the milk bottles marked "Condemned" in Massachusetts and sold in New York are used merely for catsup. They are also used for milk. I occasionally find bottles of milk marked "Condemned," and when I ask what "condemned" means I am told that that was one of their old methods of indicating whether they were clean or not—if not perfectly clean they were marked "Condemned," and that the bottle in question is one of the old bottles. Of course we all know that is not true, but it would do no good to report it. I notified the chief of police about a year ago of a number of cases where short weights and measures were used and it had no effect. I think the way to bring the matter of weights and measures before the people is to show them a lot of snide weights and measures, and I have a plan I want to intro-

duce in New York. I have talked to the members of the chambers of commerce of several cities on weights and measures, but I want a whole table full of snide weights and measures. They will be a better argument than ten men could make with the average audience.

Take the question of milk bottles. At a conservative estimate 10,000,000 short bottles are used in New York daily. Also, at a conservative estimate, they are at least 5 drams short each. It would be easy to figure at 4 cents a quart the amount the people are defrauded of—about \$3,000,000 annually. Talk dollars and cents—that is the thing that appeals to the public.

It is the same with butter. About a year ago, in central New York State, I bought 24 pounds of butter from 12 different stores, and out of the 24 only 3 were full 1 pound. Most of them fell below 14 ounces, 5 of them being less than 11 ounces. Mind you, this was the weight including the wooden tray and wrapping paper. On each package I put the price of the butter per pound, and the highest price paid per pound was for butter supposed to be the cheapest. This was sold at the store the bulk of whose business was with the poorer classes. In other words, for the butter which was apparently cheapest—26 cents—I really paid 40 cents per pound, while for the higher-priced butter I paid only 35 cents. That shows how the public is defrauded, and these are the arguments that appeal to most of the people.

Mr. FISCHER. How was the weighing done?

Mr. REICHMANN. It was done on spring balances by throwing the butter on the scale, and also by using false weights. A number of cities have no inspection. While in Pittsburg a short time ago I stopt in three grocery stores. With half the balances in the district you could not make a correct weighing to save your life. In one case there the dial of a spring scale read 5 ounces when there was no weight on the pan. Another great scheme is to put a big hook on the scale to hang a pad of cashier's tags on, ostensibly for convenience.

Mr. FISCHER. What do they do in the case of equal-arm balances?

Mr. REICHMANN. Simply put a piece of lead on one side and then weigh on that side of the beam.

Mr. PALMER. One concern in Boston which controls 125 stores and four or five other concerns controlling almost as large a number use ordinary equal-arm balances, and have a scheme of keeping one or two pound weights on one side and on the other side three to four paper bags folded up. We prosecuted one man for that and fined him \$50. He claimed that he weighed sugar in bags and that his practise corresponded to that. He was fined, nevertheless.

Mr. REICHMANN. The magnet and other schemes are used on equal-arm balances. The public is largely to blame for the fact that there is no inspection of weights and measures. The case is entirely in their hands and the cost is not great. Twenty inspectors in New York City, where a good deal of work is now done, cost the city $4\frac{1}{2}$ cents per capita for the whole of last year. It seems to me everyone ought to be willing to pay at least ten times that amount to have systematic inspection in their city. If everybody paid ten times that much the efficiency would be phenomenal.

I think the main point of the whole weights and measures question is the one Mr. Palmer emphasizes, and that is the sociological point; that people who can least afford it are the ones who suffer most—people who buy butter by the pound or half pound and who buy coal by the basket, and not those who put in a supply for the whole winter; those who can least afford are the worst sufferers. It seems to me that there is more chance for home mission work there than to knit woolen socks for the heathen in Africa.

Mr. RICHARDSON. You talk of snide weights and measures. Who detected these snide scales you speak of?

Mr. REICHMANN. The collection I have was collected by various sealers. I get them from every sealer I meet. Everyone I have was detected by a sealer. We have plenty of laws in New York, but they are not enforced. We hope, however, to rectify that sometime.

Mr. PALMER. Mr. Reichmann spoke of coal. During the strike and the cold season when coal sold for \$12 per ton, in many cases in Massachusetts people were paying at the rate of \$42 a ton. That is an extreme case. It was quite common, however, to find them paying \$22 per ton. We have now a strict coal law, which I had drawn up and past by the legislature. Owing to the coal and ice situation I am instructing all my sealers to take up the ice and coal law and inspect thoroly. All our ice dealers are obliged to carry ice scales. Every wagon is supposed to have a scale, and it is the duty of the customer to request that the ice be weighed. In such a case they must weigh the ice, according to law.

Mr. RICHARDSON. Where a dealer furnishes coal to public buildings, does the city weigh it or does the dealer?

Mr. PALMER. Proposals for coal provide that sworn weighers shall weigh it. The sealer of weights and measures also has a right to inspect it at any time. If a load of coal is being delivered within the city limits, that coal must be weighed by a sworn weigher. To perform his duty conscientiously he must issue a certificate stating the

weight of the coal, name of the driver, person to whom the coal is designated, and the amount of the coal, and sign it by name as sworn weigher, so that the sealer has at all times evidence that the coal has been weighed. He can even then require that it be taken to a scale and check the weighing.

Mr. RICHARDSON. It seems to me with that system the people could not be cheated very much.

Mr. PALMER. It is the ignorant class of people who pay 10 or 15 cents a bucket who are cheated worst. We only have twelve inspectors in Boston, and it is rather difficult for them to get around. As I said before, the people who can least afford it are the ones who are cheated worst.

The CHAIRMAN. Ohio is one of the foremost States in promoting pure-food laws. We would like to hear what Professor Thomas has to say about the weights and measures in that State.

Professor THOMAS. After that flattering introduction I am sorry to be obliged in the interest of truth and sobriety to put a different construction upon the state of things existing in Ohio.

The set of standard weights and measures furnished to the State of Ohio under the act of Congress of 1836 was by State law made the legal set of standards for business in that State. The secretary of state was made ex-officio State sealer of weights and measures and for many years the standards were kept in his possession. He was required to furnish copies of these standards to the several counties of the State and the county auditors were made ex-officio county sealers with authority to appoint deputy sealers. The State laws regarding the powers of municipalities conferred upon them the power to regulate questions relating to weights and measures, subject, of course, to the State laws as to what the legal weights and measures were. That included, of course, the power to appoint city and village sealers of weights and measures.

As to the duties of the State sealer they were limited, so far as they were defined by statute, to furnishing copies of the State standards to county auditors, and on request similar copies to cities and municipalities at their expense and to the testing and sealing of gas-meter provers. The latter is the only test that the law specifies must be made by the State sealer of weights and measures. County auditors are required to test and seal, when found correct, any measures that may be brought to them for such purpose. That is about the extent of the laws in the State of Ohio regarding standard weights and measures, except as regards the quantities of certain commodities

which go by certain names; for example, bushel of corn, coke, etc. There is no obligation resting on State officers, as the law now stands, to enforce anything with regard to weights and measures in Ohio, with the single exception of that for the testing of gas-meter provers.

Some of the cities and villages of the State have their specific ordinances relating to weights and measures and some of them have their own sealers of weights and measures, but so far as my observation goes they are only spasmodic in performing their duties. In Columbus during the present year only within a very short time has the existence of the city sealer of weights and measures really been made certain. At the last election there was a somewhat marked change in the party complexion of the city government, and as a result the question as to who should appoint a city sealer of weights and measures was disputed, bandied back and forth, and only recently settled. I know, simply from casual observation, that a city sealer has been at work. I have had no occasion to look into his work, but note in the daily press that he has been doing work.

It seems to me that in order to effect anything like a common basis of action with regard to weights and measures and inspection and enforcement in the several States, we need to go a little further than any consideration of the question by State sealers. I am not sure—not being versed in the law—whether under the Ohio constitution it would be possible for the State itself to enact a code of laws which could be made of universal application thruout the State and which could be enforced directly by the activities of State officers.

I have been thinking while sitting here of the advisability of one of two things: Either an attempt should be made by the State representatives to get together local State meetings of a character similar to this, only bringing together the existing city and village sealers of weights and measures thruout the different States, or perhaps as an initial move it might be even better, in order to get some fundamental points of agreement and some fundamental points of operation to start upon, to call together at the next meeting of this association not only State officials, but also the city sealers of weights and measures of, say, the chief cities in each of the several States represented.

It would be somewhat difficult in the case of Ohio for me to go into the question of State action without having behind me the active interest and the cooperation of city and village sealers. In fact, they are the people who can exert the most influence where State legislation is possible. It seems to me that, in order that action may be effective, we need a uniform system of regulations and uniform prac-

tise in the matter of inspection and of enforcement, and then the lively and effective interest of city and village inspectors.

Mr. RICHARDSON. Mr. Thomas, I want to ask you a question. You spoke of municipal inspectors as being most useful. Do you not believe that since we have to have county inspectors that county and city inspectors should all be under State authority and governed by State laws?

Mr. THOMAS. In Ohio the State delegates authority to the municipality and the municipality has under the State law authority to make its own ordinances on weights and measures, conforming only to the State standards. I neglected to state that when, some years ago, the secretary of state found the space allotted to him in the State House encroached upon to such an extent that he was obliged to use the room where the balances and weights and measures were he decided to store them in the basement of the building. But those of us who were interested—particularly Professor Mendenhall, at that time Superintendent of the Coast and Geodetic Survey and of the Weights and Measures Office—conceived the idea of having the office of State sealer transferred from the office of the secretary of state to the professor of physics at the State university. This was done by a special act of the legislature, and the State standards were transferred to my care and are now at the State university.

The CHAIRMAN. Mr. Thomas, you have a State oil inspector, insurance inspector, and quite a number of others. Why would it be unconstitutional to have a State inspector of weights and measures?

Mr. THOMAS. I do not say that it would be so, but I am not familiar with the law and do not know whether it would be possible or not.

The CHAIRMAN. If we assume that it would be unconstitutional for the National Government and also for the State government, then that would leave it to the cities and the counties, and it would be almost impossible to get uniformity.

Mr. THOMAS. I find I have overlookt one point. The State superintendent of mines is ex officio State sealer of weights and measures as regards the mining operations.

Mr. CHAIRMAN. I noticed that provision in the laws.

We have with us Mr. Pettis, of Rhode Island, who needs no further introduction.

Mr. PETTIS. We have no county organization in our State, but township governments. The town and city sealers are elected by the town and city councils, and retain all the money they get in fees. It is not a very lucrative position for some of them. For example, the town of

Middletown, between Newport and Portsmouth, elects a town sealer every year, and Mr. John D. Blair is now sealer. They never had a store in that township, but they pay me \$15 every year to examine the standards they never use. Providence is the only town that pays a salary to the sealer and that is a recent arrangement. Prior to that the sealer retained all the fees collected. I was city sealer there myself for seven years.

Speaking of fraudulent measures and how to dispose of them, when I became sealer of weights and measures in Providence, March 10, 1890, I confiscated 1,600 dry measures from that date to July 4, all of which helped to keep the Fourth of July bonfire going. It took me all day to carry them to the fire and burn them. During the balance of the year I confiscated 400 more, making altogether 2,000 measures. During the next year I did not find 100, which shows that my predecessors had been lax in their attention to business. In Rhode Island we do not give back false weights or measures, except in cases where they can be repaired. The merchants are required to buy new ones. Where we think they can be repaired we affix a tag with the words, "Examined and found incorrect" and when they have been put in order the sealer examines them a second time and if he finds them correct he takes the tag off, puts on his seal, and collects the fee. In the case of incorrect wooden dry measures we knock the bottom out and throw the pieces in our wagon. Copper or tin measures are broken up with a hammer—that is the best way—for then no one can use them again. I think we do things better in Rhode Island than they do in any other State in the Union—we have the best working system.

The CHAIRMAN. I do not believe that we can overestimate the moral effect of having some one to look after things. We find that illustrated in our work here every day. I had occasion to sign a certificate the other day for a batch of thermometers submitted for test, and I noticed that they were from a firm that had submitted the first thermometers when that work was started. In that first batch 30 per cent were wrong, in the last batch of fifty or sixty there were none. Now it was not due to any desire to make wrong thermometers in the first case, but the firm did not have correct standards. The fact that we are testing thermometers has had a very important effect on the quality of those now made.

Mr. PETTIS. I might say, if you will allow me to say one more word, that the State sealer of Rhode Island goes to the towns once in three years and examines their standards, scales, weights, and measures, and sees that they are correct. He is paid for it by the town. While on

these trips I go thru the stores in the town, and if I find anything wrong I call the attention of the town sealer to the matter.

The CHAIRMAN. We have with us again Mr. Hazen, from Vermont, who gave us a very interesting talk last year.

Mr. HAZEN. After the convention last year, and after learning something more in regard to the laws in my State than I knew before, I wrote to the State treasurer, who is the custodian of weights and measures provided by the Government, asking him to give me a list of the standards in his possession. In reply I was informed that he had no list, but that he would attempt to furnish me one later on. I think quite likely he had not familiarized himself with the law on that subject, which reads:

The State treasurer shall preserve in his office and keep in repair all the standard scales, weights, and measures furnished by the General Government to the State, and shall keep a record of the same.

The law also provides that each county treasurer shall provide and keep in repair certain weights and measures, but when I telephoned to the county officer he said that he remembered having seen something of that sort years before, but did not know where they were.

I also found that while the law required each town to keep copies on hand, I could not find any trace of them whatever around my town. It all goes to show what has been emphasized here to-day, that the laws in our States are very lax on this subject, and it is a great injustice to the people. Of course, in the State of Vermont, where there are not so many large cities, we do not feel the effect of it nearly as much as they do in the larger cities, but at the same time I do not question that a great many fraudulent weights and measures exist in my State. When we buy meat of our butchers, butter and sugar of our grocer, we are not at all sure that we are getting what we pay for. The law in the State of Vermont requires that our weights and measures shall be sealed; that the State, county, or town treasurer shall prove and seal scales, weights, and measures presented to them for that purpose—that is, it is optional with the owners of weights and measures to present them for that definite purpose.

Now, if I am correctly informed, the laws in England are very much more stringent. Mr. Pettis informed us that in Rhode Island the sealer has no jurisdiction over scales used by private individuals and corporations in their own work and for their own purposes, and that, I believe, is also the case in England. A mill owner may have his scales examined as he pleases and the Government has no jurisdiction over them, but whenever they are used for the purposes of trade then

they must be examined in such a way that the evidence of their having been inspected can not be removed or changed thereafter. The laws are very much more stringent than they are here. I think this is one of the most important subjects before us. I might say it is second only to the pure-food laws which are being adopted by Congress, and the important question before this convention is what can we do about it.

It has been suggested that it is not constitutional for the National Government; and there is where the first step must be taken. I wish there were some way whereby a large amount of literature could be prepared and distributed. I would like to distribute any amount of it in the State of Vermont, for the purpose of public education, and to get up public sentiment, and then if the National Government should move I am sure all or a great many of the States would be ready to move on the same lines. It has been suggested this afternoon that the delegates to this convention should make reports to their respective governors, and I would say that when I returned from the convention last year I did make a typewritten report of several pages, most of which was published in the local papers. I knew that would reach only a small percentage of the people, but it was a small start in the right direction, and I hope the actions of this convention, the information which has been brought out here this afternoon, will be disseminated as widely as possible, so that as time goes on there may be more attempts to interest the National Legislature, State legislatures, and accomplish something, for surely it is a very important question and one that affects a great many poor people.

Mr. RICHARDSON. I would like to ask you a question. I understand from the drift of your remarks that you have no county sealers in your State at all, only one State sealer.

Mr. HAZEN. They are in existence and they are required to seal any weights and measures brought to them for that purpose and they are allowed certain fees for doing it, but I am not able to find anything that requires them to go about inspecting weights and measures used in trade.

Mr. RICHARDSON. Do you mean that you do have county sealers, but that persons using weights and measures are not obliged to take them to the county sealers if they get out of order?

Mr. HAZEN. That is the way the statute reads. I don't know but what there may be in the larger cities local laws on the subject.

Mr. PETTIS. I might mention that in Rhode Island every sealer is required to give thirty days' notice when he is ready to certify work,

and that anybody who brings in his weights, measures, balances, and scales during this thirty days will save the expense of cartage or teaming, but after thirty days he is required to inspect every scale, weight, and measure in town.

MR. RICHARDSON. I am disappointed to see so few here this year, after the interesting and instructive speeches, etc., that were sent out thru our chairman's report of last year to sealers of every State—especially the speech delivered by your humble servant; I thought that would bring everybody here from the South, but I believe I captured only one southern delegate—the gentleman from Kentucky. I don't believe anything has occurred in my State since the last meeting. Things have been running along in about the same old rut. I had printed some extracts from the laws of my State on the subject of weights and measures, which I have brought along with me. I would be glad to have any sealer take one before leaving and read it over before to-morrow; that will put you in a position to make some suggestions to me that I may make to the executive committee of our legislature which has the matter in charge.

I would like to mention one thing that happened in my State since I was here last year. The county sealers are appointed by the county judges of each county in Virginia, and since our last meeting here we have had one sealer appointed in that part of the State we call Red Brush. After his appointment I received a letter from him. (I will here state that I hold pretty near as many offices in my State as Mr. Norwood does in Kentucky. I am the register of the land office and have a great deal of work to do in connection with that; ex officio superintendent of buildings and grounds of the State; superintendent of weights and measures, and chief of the capital police, so if any of you get down to Richmond I am in good shape to take care of you.)

To get back to my story, the county sealer resigned and the county judge appointed another in his place. Soon after his appointment he wrote to me that he had no apparatus with which to test weights and measures. He said: "I am in a great hurry for those things, and wish you would send them to me by registered mail." The proposition to send a couple of thousand pounds of cast weights that way was rather hard on me, so I referred the matter to our governor. Now, our governor is a little fond of joking, so he said to me: "Richardson, aren't you the register; can't you send them that way?"

Now, I suppose it is not necessary for me to call your attention to the wonderful speech I delivered here last year, for no doubt all of you read it in the proceedings. If not, I hope you will. Then I want

you to take this abstract of laws, read it over, and if you have any suggestions to offer or any changes you think should be made I would be very glad to have you indicate them.

Mr. NORWOOD. Mr. Richardson, I believe your State is a coal-mining State?

Mr. RICHARDSON. The coal-mining business in our State is not very extensive. We have only a few counties in the western section that produce coal.

Mr. NORWOOD. I was of the opinion that your State was quite an extensive producer of coal. What I want to know about is the inspection of the mine scales. Is that under your jurisdiction?

Mr. RICHARDSON. No, sir; the mine business is something that is really new in our State, outside of the lead and iron mines. If you will read this abstract you will see exactly what the sealer of weights and measures is required to do in the State of Virginia.

Mr. NORWOOD. I am trying to find out something about the track scales of mines. I believe they would correspond to some extent to hay scales.

Mr. RICHARDSON. As far as the State sealer of weights and measures and the subsealers of our counties are concerned they accomplish nothing, and with the implements they have to carry it out it is almost impossible to do anything. They have a great clumsy lot of stuff.

At 4.45 p. m. the meeting adjourned, after it had been decided to meet the next morning at 10 o'clock.

FRIDAY, APRIL 13, 1906.

The meeting was called to order by the chairman, who spoke as follows:

I am very sorry to say that Mr. Southard, the chairman of the Committee on Coinage, Weights, and Measures, was called home rather unexpectedly yesterday evening, and will not be able to be with us. He expected to be here this morning and say something about the prospects or the possibilities of national legislation in regard to the questions that we have been discussing. I have discuss the question a great many times, and I think the attitude of most of the legislators is that there ought to be national legislation, and they are willing to do just as much as is constitutional in the way of uniform laws. If it could be attached to some appropriation bill, or bill for revenue tax, there would be no question as to its passage. I have been looking over the laws of the different States and have made a synopsis of the provisions in each State so far as sealers, custodians, and officers are

concerned, and one or two of the principal provisions. If we have time later I shall be glad to present them.

Mr. FISCHE. has been looking up the question of foreign laws and regulations regarding weights and measures, and when we come to formulate a law concerning weights and measures we can learn a great deal from the older countries. I think there is perhaps no one of the great countries that has given as little attention to weights and measures as this. There are a great many things they do we would not want to do, and they have a great variety of details; nevertheless there are a great many important things which we can learn from the experience of those countries that have gone into this subject very thoroly for the last hundred years. Unless there is some other business that you desire to transact, I will now ask Mr. Fischer to present his paper.

Mr. FISCHER. Since one of the most important duties of this and future conventions will be the framing of laws and regulations which shall provide for the testing of commercial or trade weights and measures, it is of the highest importance that the practise of other countries be considered.

I shall therefore attempt in as few words as possible to lay before you the organization of the inspection service of a few of the more important countries in this respect, namely, Great Britain, Germany, and France. Among these might also be included Switzerland, admitted by its neighbors to have the most perfect laws and system of inspection in continental Europe. It appears to me, however, that it will be more profitable for us to consider those countries more analogous to ours in point of population.

Great Britain.—In Great Britain practically all commercial transactions involving the use of weights and measures are regulated by the acts of Parliament past in 1878, 1889, 1897, and 1904. The 1878 act gave the standards department under the board of trade power to conduct "all comparisons, verifications, and other operations with reference to standards of measure and weight, in aid of scientific researches or otherwise, as the board of trade from time to time thinks expedient."

The standards department has the custody of the imperial standards and is required to compare all copies of any standards submitted by any local authority, and if found fit for the purpose of being used by inspectors of weights and measures they are required to stamp them.

The important duty of verifying and inspecting the weights and measures used in trade is carried out in England by inspectors appointed

by local authorities, such as county councils, and in the case of boroughs the town councils. The law states that the local authorities of every county and borough, from time to time shall provide such local standards of weights and measures as they deem requisite for the purpose of verification or inspection of all weights and measures in use in their county or borough, and shall fix the places at which such standards are to be deposited. The said local authorities shall also provide from time to time proper means for verifying weights and measures by comparison with the local standards, and for stamping the weights and measures so verified.

A local standard of weight shall not be considered legal nor be used for the purpose of trade unless it has been verified or reverified by the board of trade within five years before the time at which it is used. Measures must be verified within ten years from the time they are used.

Every local authority shall from time to time appoint a sufficient number of inspectors of weights and measures for safely keeping the local standards provided by such authority and for the discharge of the other duties of inspectors under this act, and the local authority may suspend or dismiss any inspector appointed by them or appoint additional inspectors as occasion may require.

A maker or seller of weights or measures, or a person employed in making or selling thereof, shall not be an inspector of weights and measures.

A weight or measure duly stamped by an inspector of weights and measures shall be a legal weight or measure thruout the United Kingdom, unless found to be false or unjust, and shall not be liable to be restamped because used in any other place than the one in which it was originally stamped.

The expense of providing and reverifying local standards, the salaries of inspectors, and other expenses incurred by the local authority shall be paid out of the local rate.

Previous to 1904 the local authorities could establish by-laws for regulating the testing of weights and measures with the local standards, but such regulations are now made by the board of trade and laid before Parliament.

The operation of the British laws is admirable so far as the control of trade weights and measures is concerned. I had the privilege of inspecting one of the local stations in London, of which there are six. Attached to this station were three inspectors, a couple of coal inspectors, and a number of assistants. The buildings, which were of the most substantial character, covered very nearly an acre of ground

in the busiest part of the city. In addition to the equipment of testing and sealing, this station has two wagons with platform scales built in them for the weighing of coal, which is compulsorily delivered in bags weighing 2 hundredweight, 1 hundredweight, one-half hundredweight, one-fourth hundredweight, and 14 pounds. There were also two handsome cassettes, with complete inspection outfits which could be stored under the seats. The driver sits outside and may be communicated with by a speaking tube. When making an inspection the vehicle is left a short distance out of sight of the premises to be inspected, and the inspector proceeds on foot. If any irregularities are found, the standards are brought from the vehicle and the inspection is made in the traders' store or warehouse. In testing scales and weights used by hawkers use is made of the cassette as a testing room.

Where weights and measures or scales are so unjust as to necessitate legal proceedings against the owner they are seized, but if the defects are trifling the owner is cautioned and a revisit is made by the inspector later. Incorrect weights or measures not confiscated must be sent to a scale or weight maker and repaired, as no adjustments are made by the inspectors in London. Permission is granted to some inspectors in country districts by the board of trade to adjust weights and measures and to repair scales.

In England all beer glasses, and jugs if used as measures, must be tested and stamped before they can be used. These are, therefore, shipped in barrels and crates directly to the inspectors, who test and stamp them. While at the station referred to, in 1903, I saw a number of barrels of glasses just received from the United States and, much to my gratification, was informed by the officer in charge that American glasses were usually more uniform and accurate than any others submitted.

While the responsibility for using unstamped weights and measures rests upon the trader, it is the manufacturer who usually submits his goods to be stamped, preferring to pay the fees and sell his goods ready for trade use.

In England, Scotland, and Ireland there are employed altogether about 1,100 inspectors. Inspectors can not be appointed as such unless they pass an examination and hold a certificate from the board of trade, and a penalty is imposed on persons acting as inspectors without having obtained such certificate.

France.—The law regulating the inspection of trade weights and measures in France was passed in 1837 and except for a rearrangement of the inspection districts and the manner of the appointing of the

verifiers and their deputies the organization is substantially unchanged. The execution of the law is under the minister of commerce, who is assisted in carrying it out by a consulting committee composed of scientists, legislators, and technical men. Originally each communal district had a verifier and the necessary assistants, all of whom were appointed by the minister of commerce on the recommendation of the prefects of the communes to whom they were directly responsible.

In 1873 the number of districts was reduced to five, each under a chief verifier, who is assisted by the necessary number of verifiers, assistant verifiers, helpers, etc. Every year simultaneous examinations are held in the duties of assistant verifier, in the largest cities of the five districts. A special committee named by each district classes the candidates in the order of their merit, and the findings are then sent to the minister of commerce, who turns them over to a central committee where the different marks are examined and the candidates are finally classified. Appointments are then made by the minister as vacancies occur. The verifiers are appointed from the list of assistant verifiers who have served at least three years, and the chief verifiers are promoted from the verifiers who have served six years.

At the present time there are about 400 verifiers and assistant verifiers, all of whom are paid by the Government and are required to take an oath before they are permitted to assume their duties. Each verifier is furnished with the necessary standards and stamps by the Government and these standards must be verified at the chief office once in every ten years.

The law provides that all weights and measures shall be brought to the verifier and stamped before being issued for trade use and that trade weights and measures shall be tested once each year.

Balances, steelyards, and other weighing machines must also be submitted for verification before being exposed for sale or issued to the public. It is also provided that the mayor and police should keep watch against any unjust dealings in goods which, when cast or molded, are sold by the piece, or in a packet of a stated weight. In retail dealings in beverages or other liquids no specific or definite measure shall be sold unless it shall have been actually measured. Verifiers are authorized to seize false or defective weights, measures, or weighing and measuring instruments and to prosecute offenders. The law also specifies the weights, measures, and measuring and weighing instruments which are allowed in trade.

There are two distinct kinds of verification of weights and measures—the original before being issued for use, and the periodical veri-

fications. There is no charge for the original verification, a license duty upon all makers of weights and measures being substituted, but fees are charged for subsequent verifications.

In addition to the testing of trade weights and measures by the verifiers they may be inspected at any time by the police authorities, who are required by law to keep copies of the principal weights and measures for the purpose, and the prosecutions for fraud are conducted by the police. It appears to be the practise of the verifier to simply test and stamp such weights and measures as are presented and the duty of the police to see that no unstamped or incorrect weights are used in trade.

Germany.—In Germany the inspection service is under the minister of commerce, industry, and public works. The present inspection laws are, with slight modifications, the same as those established by the German Confederation in 1869, when the metric system was adopted.

For purposes of administration, the country is divided into twenty-three inspection districts, the district representing the various States or provinces which make up the Empire. At the head is the Normal Eichungs Kommission, which has the custody of the standards and maintains a large laboratory in Berlin. It is the duty of the Kommission to prescribe rules for the inspection and stamping of trade weights and measures thruout the Empire and to compare the district standards with national standards from time to time. The Kommission also has authority to prescribe the kind of weights and measures to be used in trade, to establish tolerance errors, the kinds of scales which may be used in trade, and the general supervision of the work of the district bureaus.

Each district establishes and maintains a sufficient number of local bureaus to cover the territory, but the law provides that each local bureau must have at least two officials, a director, who is an administrative officer, and a sealer, who supervises the technical work. Over each district is an inspector, who is a state officer, and who acts as director of the local bureau where he makes his headquarters. Such a bureau then becomes a state bureau and is supported by the state. The sealers and assistant sealers are required to be technical men and to pass an examination before appointment. Further than to test the standards at prescribed intervals the German Government does not contribute to the support of the inspection service. The fees collected by any local bureaus go to the support of that bureau. The local sealers work under the general supervision of the inspector, but

also in accordance with regulations published by the Eichungs-Kommission. No local bureau can be established without the authority of the minister of commerce, industry, and public works.

Each sealer has a distinctive seal, prescribed by the Eichungs-Kommission, and any measure, weight, or instrument sealed by a local sealer may be used in public trade anywhere in Germany.

Beer glasses and mugs are not tested by the Aichämter (sealers) but are marked by the manufacturers and inspected by the police.

The equipment and character of the scientific work of the German Eichungs-Kommission far excels that of the national bureaus maintained by other governments, but, so far as my observation went, the practical testing of trade weights and measures is quite as well done in England as in Germany.

Austria.—The Austrian weights and measures system is under the minister of commerce, but like that of Germany, which it closely resembles, the supreme technical control is under a Eichungs-Kommission, which maintains a thoroly equipped laboratory in Vienna. For administration purposes the country is divided up into ten districts under an inspector, and each district is again divided into smaller districts under sealers. At some central point in each of the ten districts is established a complete testing bureau, which is the headquarters of the inspectors and is in close touch with the Eichungs-Kommission at Vienna. The local sealers also have offices where they make tests, but in addition they must go out and test the trade weights and measures in their districts at regular intervals. All inspectors and sealers are required to pass a technical examination held under the supervision of the Eichungs-Kommission, and are appointed by the same authority, and, as in France, are paid by the general government. In some of the remote and sparsely settled communities the local sealers may devote only a part of their time to the work of sealing, and during the most of the year they carry on some other business.

Russia.—In Russia the control of weights and measures of the Empire is in the department of trade and manufacturing, under the jurisdiction of the minister of finance. The central office, in St. Petersburg, is well equipped with appliances of the highest order, but, unfortunately, its practical usefulness in testing and controlling commercial weights and measures has been of little importance. This is due to the absence of a complete system of local bureaus and to the inadequacy of the enforcement of existing laws.

At present but a very limited number of cities of Russia possess standardized sets of weights and measures. A scheme has recently

been adopted which contemplates placing secondary standards in various parts of the Empire, commencing with, say, five, and gradually increasing the number, and with this object in view a number of these secondary standards have already been prepared.

There is no country in Europe so poor but what it maintains an efficient inspection service, and in the more progressive ones practically every weight and measure used in trade is periodically tested and stamped. The inspection is so rigid and the penalty for using fraudulent weights and measures so promptly enforced that tradesmen usually find it profitable to be just in their dealings with the public.

In a few sections of our own country the inspection service is perhaps as efficient as in any of the countries mentioned, but a similar statement can not be made of the country as a whole. In some of the States no provision whatsoever is made to examine and stamp the weights and measures in use in trade, and it would be contrary to the experience of those sections where inspection is maintained to assume that fraudulent weights and measures are not extensively used. Sometimes the wealthy and more intelligent people are able to prevent being defrauded by purchasing scales or by other means, but the poorer and less intelligent are the ones who suffer most. It seems to me, therefore, that no more important matter could be considered by this body than a plan that would make it unprofitable for anyone to use dishonest weights and measures anywhere in the United States.

The CHAIRMAN. Is there any discussion of this paper? I am sure Mr. Fischer would be pleased to answer any questions.

Mr. REICHMANN. I would like to ask Mr. Fischer if he knows about the inspection of weights and measures in South America.

Mr. FISCHER. Only in a general way. There are inspection laws, but I do not know how rigorously they are enforced. They have quite complete laws, especially in Mexico, Cuba, and Porto Rico.

Mr. REICHMANN. They have an inspection in Cuba, and I know that in the City of Mexico they carry out some specific system.

Mr. FISCHER. We have copies of the Mexican laws, the Cuban laws, the laws of Porto Rico, and those of a number of other States in this hemisphere, but it would require a personal investigation by a competent person before we could say anything about the efficiency of the inspection in the countries mentioned.

Mr. REICHMANN. Have you any report of their inspections?

Mr. FISCHER. We have copies of the laws, but no reports such as the English report I quoted from.

Mr. REICHMANN. I was rather surprised at the statement made by Mr. Fischer as to the decrease in the number of confiscations, as shown

by the London report, because the confiscations in Canada for a number of years past showed a decided decrease and finally became practically constant.

Mr. FISCHER. In explanation of what I said I might say that the inspection service had been in force for fifteen or more years before the period treated in this report, and consequently the number of confiscations had practically reached a constant state.

Mr. RICHARDSON. Mr. Chairman, I think Mr. Fischer's remarks demonstrate the fact that there ought to be an annual inspection made everywhere. That is the only way to keep down fraudulent weights and measures. In my opinion those foreign reports should be examined carefully by the executive committee, as I think there is a great deal in them which would be of value if grafted into the laws of this country. I hope if Mr. Fischer has any more of those foreign reports that he will place them at the disposal of the executive committee.

While I am on my feet I want to ask the privilege of making a statement. I picked up the Washington Post this morning down at the hotel and I found stated therein that John W. Richardson, of Virginia, spoke of the lax laws in Virginia, and related numerous incidents of methods employed to defraud customers by the use of false bottoms, etc. I would like, Mr. Chairman, to have that statement corrected in the record of this meeting. If any of the sealers present here yesterday remember of my saying anything of that sort I would like them to say so.

Mr. PETTIS. I didn't hear Mr. Richardson say anything of the kind.

Mr. RICHARDSON. What I want is that this statement be corrected in to-morrow's issue, because the Washington Post circulates quite extensively in Virginia. I hope the report of this meeting will include what I have said to-day, and also the fact that the association bears me out that I did not make any such remarks in my talk yesterday. This statement makes out that the people of my State are dishonest. I hope the stenographers will take down what I have said during this meeting; also record that the association bears me out that I did not make any such remarks in my address of yesterday.

The CHAIRMAN. Your remarks will appear as they were taken yesterday, and as no such statement was made I do not see how it can be published.

Mr. RICHARDSON. The reporter of the Washington Post is not here to-day?

The CHAIRMAN. Not that I know of.

Mr. RICHARDSON. I have a very kindly feeling for reporters. They are mighty clever men as a rule, but they sometimes make mistakes

like the rest of us and have to be corrected. There is one other statement I would like to have inserted in my remarks, and that is that since I have been superintendent of weights and measures I have never had any complaint from any consumer about being imposed upon by the merchants. Sometimes I have had one or two reports from some of the counties in which the apparatus furnished the sealer of the county had gotten out of order, and asking that it be remedied. Our laws require the county sealer to send his apparatus to the State capital to be resealed and put in order. It is true the laws are lax—that is, the laws are all right, but their operation and enforcement are lax. Since I have been sealer I have had no complaint from any purchaser of goods about not receiving the proper weight.

The CHAIRMAN. Are we to infer from that that the conditions in Virginia are ideal? Virginia is looked upon as a model State in a good many respects.

Mr. RICHARDSON. No, sir; they may not be ideal, but the people are not complaining.

The CHAIRMAN. They are very easily satisfied in Virginia, I infer. Is it your belief, Mr. Richardson, that the dealers throughout Virginia are using honest weights and measures?

Mr. RICHARDSON. Yes, sir; from the evidence that reaches me.

The CHAIRMAN. That there is very little fraud?

Mr. RICHARDSON. That is my honest belief. I suppose they would complain promptly to the county sealers and they would report the matter to the State sealer. None of the county sealers have reported anything of that sort.

The CHAIRMAN. Well, we have always looked upon Virginia as a model State in a great many respects. There is one thing I have never been able to straighten out in regard to weights and measures in Virginia—that is as regards a bushel of corn. In every county I visit I ask about the bushel of corn. I am always referred to tubs and barrels, etc., but never anything definite.

Mr. RICHARDSON. You haven't read that extract of laws I brought up to you. Let me have a copy and I will look up and inform you a little later on.

Mr. REICHMANN. I just wanted to mention one point that I failed to when I made that remark about Canada, when Mr. Fischer stated that London had reached the constant state. I have been asked by so many people in the past few years as to the benefit to be derived from inspection, and I think it would be interesting to show from an educational point of view that it has a distinctive value, to show that by a system of inspection the number of confiscations and the amount of fraud

committed have actually been decreased, and I always pick out cases, where I show that curve, as I think it is a good point to use these reports, going back far enough, however, to show the conditions when the inspection was started.

The CHAIRMAN. Are there any further questions for Mr. Fischer?

Mr. PETTIS. In Great Britain the board of trade has control of the weights and measures of the Kingdom. Now, the question for us to decide here is how are we going to proceed in this matter of regulating the fees, and the manner of testing and sealing, etc., unless the authority comes from headquarters, from the Government at Washington. We have committees in both Houses of Congress on weights and measures and we have here the magnificent Bureau of Standards. It seems to me that Congress at Washington would be the proper authority to make all laws regulating weights and measures in the United States. I hope I am not going to offend my friend, Mr. Bayer, but I know in New Mexico they have two measures in local use; the almud, about 12 inches square and about 4 inches deep. It holds about a peck. They have a dry measure there which may be made by any carpenter. This holds a little more than $2\frac{1}{2}$ bushels. These are readily devised measures in New Mexico. They take an iron and brand it to make it legal. Now, it seems to me that the Government of the United States should regulate these measures, and they should all be alike.

The CHAIRMAN. That is very true, Mr. Pettis, we all agree with you. I am sure that the Bureau of Standards will do everything in its power to bring this about, but our forefathers, who were so wise in many respects, when they wrote the Constitution, did not have weights and measures in mind except so far as establishing standards. Now, if we can not do what you mention we can do the next best thing. The main object in organizing this association was that we might unite on uniform laws. If one State adopts this new law the others will quickly follow. If we can establish in each State a practical system of inspection—a sealer or custodian at the head of the department of weights and measures in each State, a technically trained man interested in the subject, one who will see that weights and measures are used according to law, who will see that laws are enacted in accordance with suggestions that are made here—it seems to me that we should at least do that much. We can assist in the first place by suggesting model laws, as it were, and the manner in which they be carried out.

Mr. PETTIS. How are these suggestions to be made to the States, from the Bureau of Standards to the governors of the States?

The CHAIRMAN. Yes, or by this body of sealers. There are a great many ways in which the Bureau of Standards can assist. We can

gather information from foreign countries and can give suggestions in regard to methods of testing and limits of tolerance. On the other hand, when it comes to fixing the fees and penalties we can get information from those who have had actual experience in sealing and together the Bureau and the sealers should be able to recommend something in the way of a model law that each State might adopt. Questions will come up from year to year in regard to package goods and matters of that kind on which it will perhaps be advisable to secure national legislation.

Mr. RICHARDSON. Don't you think it would be a good idea to compile the laws of every State and select the best points and combine them in one law?

The CHAIRMAN. I think it would be an excellent idea to do that, and also to collect the laws of foreign countries. We have already begun a collection of the laws of foreign countries.

Mr. PETTIS. Might I ask if all the States in the Union have been supplied from this department with a cabinet of scales and standard weights and measures?

The CHAIRMAN. Yes, all except a few of the new States and some of the older ones whose standards have been destroyed. But that is not the important thing just now. What is lacking in every State is the machinery for carrying out the laws. What is the use of giving a State a set of standards if they are kept locked up by the secretary of state? How to use these standards so that the public will derive the greatest benefit from them is the important point.

There ought to be in every State an inspector of weights and measures—a State official who receives a good salary and who has charge of the standards. He may or may not have a laboratory. It is not necessary for him to start with one. If he has charge of these standards, he might have one in connection with a large city sealer until the State has provided him suitable apparatus. Certainly the State inspector should have charge of the State standards, and he should submit them to this Bureau occasionally for verification. His function in the State is not especially that of a sealer of county sets, or city sets. That should be the smallest part of his work. An annual or semiannual inspection of the standards used by sealers would be all that is necessary, but the important thing is that the State official should visit the sealer in every county and see that he is doing his work. He should see that the sealer is a technical man, properly trained, that he understands his work, and that the cities and towns are carrying out the law.

Mr. PETTIS. Should not the Bureau of Standards send a man to each State to see the condition of the standards furnished by the Government and what use is being made of them? A visit from this office by my friend, Mr. Fischer, would be an inducement to that State to get together and do something. The statutes in Rhode Island required for fifteen years that the State sealer should be a professor in Brown University, to be appointed by the governor upon the recommendation of the faculty of that college. My predecessor was Prof. James W. Coffin, who has past over the divide. When I was appointed I called up the college on the 'phone and said I would like to have the standards. I found that all those magnificent standards and balances sent to us by the National Government had been boxed up for years. It seems to me that this department ought to know this, ought to find out by sending a man there to see that they are in a proper place and properly used.

The CHAIRMAN. We are interested in them and have made inspections whenever the opportunity offered. We have kept account of them to a certain extent by correspondence, but we have no authority in the matter at the present time. If we went to a State and the governor should say "it is none of your business," we could do nothing.

Mr. PETTIS. No governor would say that.

The CHAIRMAN. They have done it under similar circumstances.

Mr. PETTIS. Suppose you send a communication to the governor of my State, or to Richmond, saying that the State standards that were sent you from this department thirty, forty, fifty years ago, whatever it may be, have not been tested for a number of years, please send them here for test. That would awaken interest. They would go back there neat, new, and effective, and that would be something.

The CHAIRMAN. The Bureau would be pleased to do that, and I am sure that in Virginia we would receive a courteous reception, but we have no authority to do it, and the officials of the State could do exactly as they pleased about accepting or disregarding our recommendations. The standards were given to the State to do as they pleased with them.

Mr. PETTIS. The States would, however, extend every courtesy to this Bureau.

The CHAIRMAN. I am sorry to disagree with you, but I have seen too much of this conflict between State and national authority.

Mr. PETTIS. I go around every year to examine the scales in my State. The State standards we call them because each town is furnished by the State. They can not be taken out of the town. I can not describe to you the places that I have taken this apparatus from, but I always insist on it being properly cared for.

The CHAIRMAN. Do not misunderstand me. I certainly wish that there were a law authorizing this Bureau to make such an inspection and requiring the States to comply with the national law in regard to the care and use of its standards, but there is nothing that would warrant us in taking that attitude now, much as we would like to do so. Could not that same result be reached by having in each State a proper official, a man who is posted on weights and measures, a man trained to do the work?

Mr. RICHARDSON. That's what is coming. This official could report to the authorities that the weights and measures were not properly used. Can we not with the present inspection laws do something? It is one thing to get new legislation, another thing to make the best of our present legislation.

Mr. FISCHER. I think it is already effectively done in Massachusetts, Rhode Island, and perhaps a couple of other States. I merely mention these States as examples. Massachusetts has a very good inspection service, as far as my observation goes.

Mr. BAYER. A law ought to be enacted in every State in the Union that the standards in use by the several States be sent to Washington to be compared with the standards of the United States at regular intervals.

The CHAIRMAN. You may enact laws and give every State an elaborate outfit, but if there is not some individual in each State whose business it is to see that the laws are carried out, whose heart and soul is in the matter, the situation will not be improved.

Mr. RICHARDSON. I think you are on the right track now. We should have a technical man at the head of the department of weights and measures in each State, and, further, every town and every county sealer in the State should be a qualified man. Our present law merely says that the weights, balances, and measures provided for each county shall be kept in such place and by such person as may be appointed by the court.

Much as I dislike to tear myself away from this interesting talk on the subject, and which I am very much interested in, I have, as I told you yesterday, an engagement at noon to-day with some of our representatives from the State of Virginia. I would like to be excused to go down there. I wish to state to the gentlemen that I will try to be with them at the afternoon session.

Mr. PALMER. In case the delegates present here have anything to do with State legislation, I would advise you to omit county inspection and to have your State and town sealers, as suggested by Dr. Stratton, made responsible to a State sealer. Of course your State

department could be as large as you wish to have it. I would suggest one State sealer, to be in the office all the time, and two or three deputies for the purpose of inspecting local standards, and one deputy to attend to the work of prosecution. If you have a State officer who has a right to prosecute, who can go over the head of the local sealers of weights and measures in making prosecutions, you will find that it will have a tendency to have the weights and measures law enforced by local sealers more than any other step you can take.

As to the supervision of the inspection service by the National Government, I don't know how far that should go, but I think it should be taken up more thoroly than it is at the present time. I think the National Bureau of Standards should be a clearing house for all questions affecting the various States, as far as national questions go, and that they should have at least one man detailed for that work. I know that Dr. Stratton has his hands full and is handicapped for want of assistants. It is impossible for the Bureau of Standards to secure as much money as it needs. I know that Mr. Fischer is handicapped. We have had some experience in getting work put thru the Bureau of Standards. It is not quick enough. In Massachusetts when we send apparatus to the Bureau for test we need it badly, and the Bureau should be equipped so that it is able to promptly take care of cases of this kind.

Dr. Stratton should not be handicapped by lack of appropriation. If he wants more men in the Bureau, owing to the increase in work, he should have them. I believe, and always have believed, that there should be at least one man in the weights and measures division of the Bureau who should devote his entire time to the gathering of information that relates to the inspection of trade weights and measures, such information to be issued as a United States bulletin from this Bureau and sent to the various States. That officer should have a knowledge of the practical methods of the sealing of weights and measures, so that the State sealer could come to the Bureau for a course of practical instruction. There is no means of learning at the present time what the proper method is of sealing weights and measures, except by actual experience, as there is little literature on the subject.

When a new sealer is appointed in Massachusetts I am often requested to send him necessary instructions as to his work. I could sit down and write for two or three days and then he would know but little. I will illustrate by a case which we had a short time ago. In one of our largest cities, which, unfortunately, are subject to political changes, a change was made in the office of the sealer of weights and measures. The sealer was appointed by the new city government and

asked his predecessor for instruction in the work, which he refused to give. The man was thrown on his own resources, with practically no knowledge of weights and measures, and he might have worked for two or three years thus handicapped before he acquired any knowledge of the subject. He came to my office and, as my time for this kind of work is limited, I referred him to the city sealer of Cambridge, whose deputy has been in office for eight or nine years. The man received instructions for a week and accumulated more practical knowledge than he would otherwise have obtained alone in a long time. That sort of work tells, but in order to do it we have to get at it in some systematic way.

The National Bureau of Standards should be the place to disseminate knowledge of this kind; it is the fountain head from which this work should start, and it seems to me that Mr. Fischer ought to have one man that he could detail for that work. New States are continually asking for information as to the sealing of weights and measures. Am I not right, Dr. Stratton?

The CHAIRMAN. Yes, and we are glad to have any sealer visit the Bureau. We began a year ago to get sealers' apparatus together. We have been accumulating model sets such as are used by foreign inspectors.

Mr. PALMER. That is, model sets for inspectors.

Mr. HAZEN. Do I understand that it is the opinion of Mr. Palmer that the sealer of weights and measures should be an inspector of weights and measures or a repairer of weights and measures? I think there is a distinction between the two.

Mr. PALMER. We do not ask the sealers of weights and measures to make repairs, but we do expect the sealer to be able to tell whether the scale is incorrect because it has a dull knife-edge, etc.

The CHAIRMAN. If you send your standards down we will endeavor to take care of them promptly. Nearly everything that you suggested is under way. We began about a year ago to get together model outfits such as are used in Europe and contemplated the designing of model sealers' outfits for our own sealers. I can assure you that every effort will be made to increase the efficiency of the weights and measures section of this Bureau, and our object in calling this meeting is to get together a body of men who will cooperate with the Bureau in accomplishing the results sought. We expect to learn just as much from the sealers as they do from us.

Mr. PALMER. Would it not be possible for this officer who gives instruction to travel from State to State?

The CHAIRMAN. I have seen that thing tried in a number of other cases; but, after all, suppose a State official should question our right to inspect his standards and methods?

Mr. PALMER. I did not mean to raise that question. I understand that the Bureau has had inquiries from the State of California. Could they not be best answered by some one on the spot?

The CHAIRMAN. It is not only the States but the great cities that will call on us for information. It may interest you to know that before Mr. Low went out of office in New York we submitted a plan to remodel the whole sealing department, but he did not have time to put it into effect, as he went out of office a few months later. Nearly all the sealers were put under civil service rules at the time. We will take just the same interest in helping any other city or State.

Mr. PALMER. I am glad to know that some of the States have taken the matter up in that way.

The CHAIRMAN. It is difficult to realize the extent to which the work of the Bureau has grown, especially in the weights and measures department.

Mr. HAZEN. It seems to me, Mr. Chairman, that the main question is this; first, fraudulent weights and measures, and, second, fraudulent use of weights and measures. Now, if this body can influence such legislation as will do away with both by very stringent laws and severe penalties for the use of fraudulent weights and measures it will be doing a very important work.

Mr. BAYER. Mr. Pettis spoke about some of the measures in Arizona, but they are not used now. We sell things by the pound. We are all more or less familiar with the confusion in weights and measures thruout the country and there has not been any plan yet suggested to do away with that. We should formulate a plan and then submit it to the legislators, and then we will have something to go by when we meet again. I do not want to impose a task upon Dr. Stratton or Mr. Fischer, of the executive committee, but something has to be done and we shall expect the executive committee to decide what it is.

Mr. REICHMANN. I think the point made by Mr. Hazen is well taken, but before we can do anything we must get the public interested. The week before last I spent nearly a week talking weights and measures to Lieutenant-Governor Bruce, Governor Higgins, and dozens of others in New York State, but unless we can get them to feel the pressure from the public they will do nothing. Just as soon as I get back to Troy I am going to telephone every newspaper in Troy and give them an interview and, furthermore, I have written three popu-

lar articles for magazines. The New York Herald has done a magnificent work in New York City, and has helped Mr. Derry, the city sealer, very much. That is shown by the fact that in reputable dry-goods stores in New York men were convicted on three counts for using fraudulent measures. I am working in Troy, and since the 1st of January 15 men have complained to the mayor about scales in different parts of the city. During the previous administration they would have been sent away and told "That does not concern us." But the present mayor is beginning to get interested.

Of course Mr. Palmer does not have that to contend with. The people of Massachusetts are educated to the point of appreciating an inspection service. The trouble elsewhere is that when you speak to the governor of any State the first question he asks is what good it will do the party. I think the primary duty of every delegate when he goes home should be to try to interest as many people as possible in the subject.

The CHAIRMAN. I do not believe that anything brings it home to a person so much as a collection of fraudulent weights and measures.

Mr. REICHMANN. I think Mr. Palmer's point was very well taken, that one of the most important parts of the Bureau of Standards is the division of weights and measures and that that particular division has not sufficient help and that every delegate should do all in his power to see that more help is secured for this work.

Mr. PALMER. That is the point exactly; this body of delegates is strong enough to secure what is needed. If a bill is presented to Congress we should go to our Senators and our Representatives and urge the importance of the measure. They are all very fair men.

The CHAIRMAN. It is only fair to Congress to say that it has given us nearly everything we have asked for, but the demands upon the Bureau have grown so rapidly that we are necessarily behind in our work. Congress has been generous to the Bureau. The work covers a large field and all branches have grown more rapidly than we anticipated. I am not, however, nearly so interested in that as I am in discussing a plan by which the Bureau will cooperate with the State sealers and be of the most assistance to the State sealers.

Mr. PALMER. It seems to me that it is necessary to get assistance before you can do that. If one man could give all his time to this work and be in touch with the man from Maryland and the man from Virginia, etc., the thing can be systematized.

The CHAIRMAN. That is a matter we can take up the next time. Here are a number of questions that we ought to take up and dis-

cuss at once. For instance, before a law can be formulated it must provide for a system in the State and which also involves cooperation between the Bureau of Standards and the State officials. Then there are questions pertaining to the custody and use of the State standards, in regard to fees, and salaries and penalties. Also as to methods of inspection, limits of tolerance, and the apparatus each State official should have. What apparatus should a traveling inspector have. I notice in looking over the weights and measures laws of the different States a great diversity. Take the District of Columbia; we have here a sealer of weights, an inspector of gas meters, etc. Now, these officials ought to be under the same office.

Mr. THOMAS. Is there any way to make one who knowingly uses false weights and measures amenable to the United States penal law?

The CHAIRMAN. I can not answer that question, but I would like to see it answered in the affirmative.

Mr. THOMAS. I did not mean to ask whether there was any existing legislation covering, but whether an act of Congress might not be past to reach the offenders whenever the offense is committed within the bounds of the United States. I think the pure-food bill, now being considered, illustrates the power of Congress in interstate commerce. It is required that all moneys used in local commerce shall be standard moneys of the United States. The question is whether it might not be unlawful under United States laws to use any weight or measure which does not conform to what Congress has declared the proper pound, quart, or half bushel. I don't know whether the question has been considered or not, but as one interested member of this organization I would like to have that looked into from a legal standpoint.

A great deal might be done if the use of illegal standards could be made a penal offense under United States law. In some parts of the United States there is a great deal more respect for the United States courts than there is for the local police courts. It is recognized to be a more serious thing to be summoned as an evildoer in the United States court than to be summoned before a justice of the peace or police court.

The CHAIRMAN. Well, Mr. Thomas, suppose it were possible to handle that matter in somewhat the same way as the pure-food laws are handled. How would this be put into effect, how would the penalty be inflicted?

Mr. THOMAS. The same way that any offense against the penal laws of the United States is punished.

The CHAIRMAN. You mean in cases where weights and measures are used in interstate commerce?

Mr. THOMAS. I would carry it just a little bit further than that. I believe it is within the province of Congress to enact legislation making the use of false weights and measures an offense in interstate commerce, but my question is broader. Can it not be made an offense against the United States laws to use false weights or measures anywhere in any part of the country? The Congress can fix what the half bushel is in the United States just as it has fixed what a dollar is in the United States.

The CHAIRMAN. Suppose, Mr. Thomas, you put that in the form of a motion and if the motion passes we will ask the opinion of the Attorney-General of the United States as to the possibility of making the use of false weights and measures in commerce of any kind an offense against the criminal law of the United States and whether it would be possible to provide for the trial and punishment of offenders.

Mr. FISCHER. Mr. Bayer has just suggested that the question of drawing up a law, a model law and regulations, be referred to the executive committee for a report next meeting. It seems to me that it would be the proper thing to lay the decision of the Attorney-General before that committee if that would be in order, so that the decision might be carefully considered by the committee before they draw up their report.

The CHAIRMAN. I will put Mr. Thomas's motion and get that out of the way. Then we can take this up. It seems to me that that is a very good suggestion. In case we do instruct the executive committee to draw up a model law, then these legal opinions should be obtained as soon as possible, so they can incorporate them in this report.

The motion was carried.

The CHAIRMAN. There is one suggestion that I would like to make, and that is that the chairman and the secretary be considered as members of the executive committee. This law should be drawn up by strict cooperation between the Bureau of Standards and the State officials.

Mr. PETTIS. I should suppose the chairman and the secretary would be ex officio members of the committee, under all parliamentary laws and usages.

The CHAIRMAN. Is anyone prepared to make a motion concerning instruction to the executive committee?

Mr. REICHMANN. I move that the executive committee be instructed to draw up a model set of laws to be submitted to this body at the next meeting.

The motion was carried.

The CHAIRMAN. Would it not be wise to take up one or two or three important questions that will be sure to arise and get an expression of opinion, or shall we leave the matter entirely to the executive committee?

Mr. FISCHER. Every proposition recommended by the committee will be thoroly discust by the members at the next meeting, before it is adopted, and that ought to be sufficient.

The CHAIRMAN. There is one point that I would like to see discust now; that is the question of fees. I have discust that question many times with different officials and there is a great difference of opinion as to whether a sealer should be compensated by fees or salary.

Mr. PALMER. In Massachusetts the State sealer is paid a salary. The city sealers are paid by fees or salary, at the option of the local government, but where fees are paid they are not paid to the sealer but go into the city or town treasury and help to make the office self-supporting.

The CHAIRMAN. I think all here agree that the State sealer should be a salaried man, but there may be opposition to that in some cases. It will be looked upon as a new State or city office and for that reason will encounter opposition.

Mr. PETTIS. Mr. Chairman, in the State of Rhode Island the State sealer is paid both by salary and by fees. He receives an annual salary of \$500 and is required to be in his office at the state-house on Tuesdays and Fridays of each week from 9 to 12—that is, six hours each week. When he visits a town to examine, to test, or to adjust a set of standards he doesn't touch the working sets at all, but merely the standards, for which he receives \$15 and expenses for transporting his apparatus back and forth.

The CHAIRMAN. Suppose we assume that our model law will provide for, say, three classes of officials. Personally, I think two would be sufficient, but suppose it provides for three—a State official, a county official, and a city official. Are we all of the opinion that these officials should receive salaries, or that the merchants should pay a fee for inspection?

Mr. PETTIS. In Rhode Island we have no counties.

The CHAIRMAN. Leave out the county sealers then. Say you have a State official and deputies who may be either county or city sealers. Should these officials be salaried officials? I think that we would probably all agree as to the salary, but should fees be charged for inspection? I don't suppose that there is any question but that fees

should be charged. The inspection should not, however, depend upon fees being paid.

Mr. PALMER. We say no in Massachusetts. We wish to eliminate fees for inspection. Under the fee system the sealer can only inspect once a year and consequently a merchant could deliberately change his scales if he wished to and have no fear of the inspector coming around again. The inspector has collected his fee for that year and there is no incentive for him to go again.

Then there is the case of the peddlers and hawkers. I know of one man who owns twenty teams which he lets out by the day to hawkers and peddlers, so that practically every day these teams have a different owner. We seized twelve teams last year because the hawkers were using false measures, but it was very seldom that we got the man in charge of the team, and so we held the owner.

The CHAIRMAN. Your idea is that the official should be paid for inspecting weights and measures, and should inspect them whenever it is necessary, or as often as he deems it necessary.

Mr. PALMER. It is for the public good, as it protects everybody in the town or city where the work is performed.

The CHAIRMAN. Now, if we instruct our executive committee to that effect, we have settled one vital point of the whole thing. Are we all agreed on that point?

Mr. PALMER. We have found the collection of fees very bad and have eliminated it from our judicial system; clerks of the courts are now paid by a certain scale of salaries and all fees which they collect are turned into the county treasurer.

The CHAIRMAN. I have often thought that we might have in each State a State inspector, or sealer, and two or three classes of district inspectors. Suppose we assume three classes of inspectors; an inspector such as you would find in the city of New York would rank as one of the first class. I am speaking of the head official of the city of New York, not of his local inspector, an inspector or sealer who is directly responsible to the State sealer. A city of the first class should be provided with facilities for testing not only ordinary weights and measures, but the higher grade weights and measures used by druggists, jewelers, etc. He should also be provided with equipment for testing water and gas meters.

There is no reason why the testing of meters should not be done at the same office, and thus be concentrated under one head. There is no reason why that inspector should not test voltmeters and ammeters. That will some day be required by city regulations. We would then

have an inspector of the first class, with an office which is suited to the needs of a great city. An office of the second class should suit the needs of a county or a moderately large city where the city does not go into the regulation of all these other matters. An inspector of the third class is an inspector who would have charge of the county district where there are several small towns and be prepared to visit them from time to time. It seems to me that our model law should provide for some things that are not ordinarily classed as a sealer's duty. There is no reason why all the States should not be provided with a laboratory and an outfit; that, of course, is the desirable thing, but our first plan need not involve that. There is no reason why the State inspector should not establish himself in a first-class office and make that the State office as well. That's practically what you do in Boston, is it not, Mr. Palmer?

Mr. PALMER. Yes, but one difficulty now is that different towns have different town ordinances.

The CHAIRMAN. I am assuming that the National Government will have a right to legislate for the States and that the States will have the right to legislate for the different counties and that consequently we will have uniform ordinances. I am also assuming that all State inspectors would meet here annually. They would meet here to compare notes and to cooperate with the Bureau of Standards, and the Bureau of Standards would have authority to inspect the work of the State inspectors or sealers.

Mr. PALMER. I think "State inspectors" would be a better title than "State sealer." They should be subject to Government inspection.

Mr. PETTIS. I agree with what Mr. Palmer, of Massachusetts, has said, and I would like to add something. When a man takes the place of the State sealer he should come here and be instructed in all the mechanics of the different scales. One or two appointments have been made in my State this week, and when I get home I shall address them letters of instruction. The city councils or town councils appoint these men.

The CHAIRMAN. Are there any requirements? Does the sealer have to be a certain kind of man, or can anybody be appointed a sealer?

Mr. PETTIS. There are no requirements whatever, except that the candidate shall be acceptable to the council. It looks as if the executive committee has a lot of work mapped out for the year, and I would like to see Dr. Reichmann on it. I make a motion, Mr. Chairman, that the executive committee be increased to five, two additional members to be appointed. I think we will find it necessary to carry on

considerable correspondence during the year and to gather considerable information before the next meeting. I think we will find it necessary to have two additional members in addition to the chairman and the secretary.

The motion was carried, and Messrs. Reichmann and Hazen were added to the committee by the chairman.

Mr. PALMER. We should have some kind of by-laws, and I move that during the recess the executive committee draw up tentative by-laws, so that we may have something to work with.

The motion was carried.

Mr. FISCHER. I would like to inquire just what relation the chairman and secretary have to the executive committee?

Mr. PALMER. I think the chairman and the secretary of the association should be the chairman and secretary of the executive committee as well. I thought that was understood.

At 12.35 the meeting adjourned to reassemble at 2 p. m.

AFTERNOON SESSION.

After the meeting of the executive committee the conference was called to order at 2.30 p. m. by the chairman.

Mr. PALMER. I would like to ask the secretary if the report of the executive committee is ready?

The CHAIRMAN. Will the secretary please read the resolutions of the executive committee.

The secretary read as follows:

Meeting of the executive committee held at 2 o'clock p. m. on April 13, 1906, in the Director's office, Bureau of Standards.

Present: Messrs. Stratton, chairman; Palmer, Pettis, Thomas, Reichmann, Hazen, and Fischer, secretary.

Upon motion, it was decided to call the meeting "The National Conference on Weights and Measures."

Upon motion by Mr. Pettis, it was decided that the officers shall consist of a president, secretary, and an executive committee of five, in addition to the president and secretary.

It was moved and carried that the chief of the weights and measures division of the Bureau of Standards shall be permanent secretary of the organization.

A motion was made by Mr. Pettis that the annual meetings shall take place on the first Wednesday in April. After some discussion the motion was withdrawn by Mr. Pettis, and Mr. Palmer then moved that future meetings be held on the first Wednesday in October, in order that the Director of the Bureau of Standards might incorporate in his estimates any recommendations of the conference. The motion was carried.

Mr. Palmer moved that the executive committee be appointed by the Chair, the first appointments to be for one, two, three, four, and five years, and subsequent

appointments to be for a period of five years. After some discussion by Messrs. Thomas, Hazen, and Reichmann, Mr. Palmer withdrew his motion and instead moved that the committee be appointed each year by the president. The motion was carried.

Mr. Hazen moved that the duties of the president, secretary, and the executive committee be those which usually appertain to such officers and committees, and that the executive committee also perform any special duty assigned to it by the conference.

Mr. THOMAS. I move that the executive committee be directed to prepare and to send to the governor of each State not represented at this meeting an urgent appeal requesting the presence of an official representative of his State, preferably a person warmly interested in the subject of weights and measures. My idea is that the appeal should not be simply a request, but that it should embody also a brief, direct statement of the purposes of this organization and contain some few facts regarding the experiences that have been here related as to the prevalence of incorrect weights and measures, the purpose being to impress them with the importance of the object aimed at, and that it can only be attained by the cooperation of all the States in the Union.

Mr. CUMMINGS. I heartily approve of what Mr. Thomas has said and hope that the motion will be carried.

Mr. THOMAS. I meant to add another thought—that the executive committee be authorized to sign to that appeal the names of all the representatives here present.

The CHAIRMAN. I would suggest that that recommendation be put in the form of a resolution.

Mr. THOMAS. I accept that suggestion.

The CHAIRMAN. If there are no objections the executive committee will feel authorized to prepare and send to the governor of each State a letter as suggested by Mr. Thomas.

There were no objections, and the motion was therefore carried.

The CHAIRMAN. Practically all the letters received from the governors in response to our notification concerning this meeting express approval of the movement. The only reason that every State is not represented is that in many cases no funds were available from which the expenses of delegates could be paid. The time has come, however, when every State will be compelled to take up this work.

Mr. PALMER. I would like to ask whether it is the intention to incorporate in the report of the proceedings the names of the delegates. It was not done last year, I suppose, because the number was so small.

The CHAIRMAN. I think it would be a good idea to send to every State custodian or sealer a report of our proceedings, with a request

that he make every effort to interest the proper people in the necessity for an efficient inspection service.

The SECRETARY. That was done this year. Every governor was furnished with a copy of the compiled laws and the proceedings of the meeting held last year. In cases where we knew the State sealer or custodian we also sent a letter.

Mr. PALMER. Every delegate here should constitute himself a committee to educate States surrounding his own. I would like next year to see a larger number of States represented. If we have to wait very long for the proceedings of this meeting, I would recommend that the letters we decided to send to the governors be sent as soon as possible.

The CHAIRMAN. According to the decision of the executive committee, the next meeting will be held in the first week in October^a of this year. That will make two meetings this year.

Mr. PETTIS. Before we adjourn I would like to show a few forms that our sealers use in Rhode Island. I have here a receipt book, an inspection card, and a condemnation card. If any delegate cares for the copies he is at liberty to help himself. I do not care to take them back.

Mr. HASKELL. I would suggest that the chairman request certain members of the association who are sealers of weights and measures to prepare special papers on subjects to be assigned by the chairman. It would create more interest in our meeting if there were a half dozen papers prepared on different subjects and read before the association. Has this matter been considered?

The CHAIRMAN. We have left that in the hands of the executive committee. I agree with you that we ought to have a definite program the next time.

Mr. HASKELL. I can see that the interest is growing. I am very sorry I was unable to be here yesterday.

Mr. THOMAS. I move that a vote of thanks be given to the Director, the chief of the division of weights and measures, and the staff of the Bureau for the courtesies extended to this association.

Mr. PETTIS. I second the motion.

Mr. HASKELL. I will put the motion. All in favor say aye. The ayes have it, and the motion is carried.

The CHAIRMAN. I am sure, gentlemen, that we appreciate your action. We are very glad to have you with us and only regret that

^a After further consideration the meeting announced for October was postponed to a later date.

there are not more representatives this year. I am sure all of us recognize the division of weights and measures as one of the most important divisions of the Bureau, as it reaches the people directly. I feel confident that this organization will be of very great assistance to the Bureau in finding a solution to the important problem of how to render effective inspection service thruout this country.

Mr. PALMER. Is there any further business? If not, I move that we adjourn.

Mr. REICHMANN. I second the motion.

The motion carried and, at 4.15 p. m., the meeting adjourned.

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DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
WASHINGTON

THIRD ANNUAL CONFERENCE

AND

THE WEIGHTS AND MEASURES OF THE UNITED STATES

HELD AT THE NATIONAL STANDARDS
BUREAU
MAY 16, 1920 TO 1922



U. S. GOVERNMENT
OFFICE OF THE DIRECTOR, BUREAU OF STANDARDS
WASHINGTON



DEPARTMENT OF COMMERCE AND LABOR

BUREAU OF STANDARDS

S. W. STRATTON, Director

THIRD ANNUAL CONFERENCE

ON

**THE WEIGHTS AND MEASURES OF
THE UNITED STATES**

HELD AT THE BUREAU OF STANDARDS

WASHINGTON, D. C.

MAY 16 AND 17, 1907



**WASHINGTON
GOVERNMENT PRINTING OFFICE
1910**

LIST OF DELEGATES WHO ATTENDED THE CONFERENCE

- R. J. BECK,**
Superintendent of the State Capitol,
Harvard, Ill.
- ALFRED E. BENT,**
State Treasurer,
Denver, Colo.
- PHILIP COOK,**
Secretary of State,
Atlanta, Ga.
- L. A. FISCHER,**
Chief of Weights and Measures Division,
Bureau of Standards,
Washington, D. C.
- J. W. HAARER,**
Deputy State Sealer of Weights and Measures,
Lansing, Mich.
- W. C. HASKELL,**
Sealer of Weights and Measures,
Washington, D. C.
- B. V. HILL,**
Professor of Physics, University of Kansas.
Lawrence, Kans.
- S. V. MATTHEWS,**
State Commissioner of Banking,
Charleston, W. Va.
- D. C. V. PALMER,**
Deputy State Sealer of Weights and Measures,
Boston, Mass.
- G. H. PETTIS,**
State Sealer of Weights and Measures,
Providence, R. I.
- F. REICHMANN,**
State Superintendent of Weights and Measures,
Albany, N. Y.
- J. W. RICHARDSON,**
Register of the Land Office and ex officio Superintendent of Weights and Measures,
Richmond, Va.
- E. B. ROSA,**
Acting Director of the National Bureau of Standards,
Washington, D. C.
- W. P. STAFFORD,**
Associate Justice, Supreme Court of the District of Columbia,
Washington, D. C.
- E. B. THOMAS,**
Professor of Physics, Ohio State University and State Sealer of Weights and Measures,
Columbus, Ohio.
- J. SUTTON WALL,**
Chief Draftsman, Department of Internal Affairs,
Harrisburg, Pa.
- G. L. WELD,**
State Superintendent of Weights and Measures,
Iowa City, Iowa.
- H. A. R. WOOLF,**
Chief Inspector of Weights and Measures of Baltimore,
Baltimore, Md.
- A. N. YODER,**
State Sealer of Weights and Measures,
Butte, Mont.

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^a Later appointed commissioner of weights and measures for Massachusetts.

REPORT OF THE THIRD CONFERENCE ON WEIGHTS AND MEASURES,

HELD AT THE BUREAU OF STANDARDS,
WASHINGTON, D. C., MAY 16 AND 17, 1907.

FIRST SESSION (MORNING OF THURSDAY, MAY 16, 1907).

The meeting was called to order at 10.15 o'clock in the lecture room of the Bureau of Standards by the secretary, who introduced Dr. E. B. Rosa, Acting Director of the Bureau.

Professor ROSA. I am sorry, gentlemen, that the Director of the Bureau is not here to welcome you this morning. He has taken, as you know, a very great interest in these gatherings, and had planned to be here—in fact, fully expected he would be here—but on account of important business in the Bureau he was detained from getting away on his trip to the West, so that it has been impossible for him to get back in time for this meeting. In his place, however, I take very great pleasure in welcoming you to the Bureau and hope that you may find time, either during the sessions or afterwards, to visit the laboratories of the Bureau, not only the various laboratories where weights and measures are tested, but the other laboratories. Every room is open to inspection and you will find a great deal of interest. It is not necessary to be a thorough specialist in every line to see things of interest in the various laboratories of the Bureau.

As you know, the work carried on in the various departments here depends very much on the standards of length and mass, with which you are chiefly concerned. As, for example, in electrical work we do not have a standard ampere, in the same way that you have a standard meter, to measure electric current, but our electrical measurements depend fundamentally upon these same units of length and mass, with which you are concerned, in addition to that of time, so that when you fix a standard for measurement of electrical current, the standard for measurement of electrical resistance, or other units, we are really basing them directly upon the unit of length and the unit of mass as well as the unit of time.

Your work, so far as I understand it, is concerned almost entirely with the measurement of length, mass, and volume, but there may

come a time, in the not distant future, when it will be otherwise, possibly looking out also for electrical measurement. It does not seem to be practicable at once, but the testing of electrical measuring instruments is something of very great importance. The work before you is of interest and very great value. There is no doubt whatever that the States ought to get together in the matter of laws concerning weights and measures. It is not a credit to this country that trade should be carried on according to different standards in different States, and this body has within it the power to accomplish a great deal of good in securing uniformity in the laws throughout the country. But when you have the laws, that is very little, of course, if they are not observed, and this body has within it the power to stir up public sentiment to the end that the laws may be respected and observed, and enforced, when necessary, by penalties.

Just at this time a great deal of attention is being given to the matter of requiring the great corporations to observe the laws, and to cease from oppressing weaker rivals or competitors in business, and the Government, or certain branches of the Government, has received the approval of the country in their efforts to make great railroad corporations and other corporations observe the laws. There is no more reason why these great corporations should be compelled to observe laws than that the retail dealers should be compelled to observe them. And the burden falls always upon the public through the oppression, extortion, and fraud connected with these smaller transactions, which are of course vastly greater in number than the larger ones. Therefore it seems to me that this body can bring about measures which should result in great good throughout the country. We are behind other countries in this respect, and it ought not to be many years before the United States should be fully up to the advance made by the leading nations of the world in this particular.

I am glad to see so many here, and I hope that the number will increase until all the States are represented regularly at this annual conference. As I am not a member of this body, I will ask some one who is a member to take charge and proceed with your business.

Mr. PETTIS. You had better act until we get some one. I move that Mr. Fischer be made chairman of this conference.

Mr. REICHMANN. I second that motion.

Mr. FISCHER. I have my hands full, without undertaking the duties of the chairmanship. I was elected secretary of the society last year and have been acting in that capacity ever since, and the

matters I will have to look out for will make it impossible for me to act as chairman; and, moreover, I think it would be better for some one from your own number to act in this capacity.

Mr. REICHMANN. Mr. Chairman, in view of the fact that Mr. Fischer can not serve, I would like to nominate Mr. Palmer, of Massachusetts, for chairman. He is also vice-chairman of the executive committee, and I would be glad to have him act as chairman.

Mr. PETTIS. I second the motion.

Professor ROSA. It is moved and seconded that Mr. Palmer, of Massachusetts, act as temporary chairman in the absence of the regular chairman of this convention.

Mr. PALMER. I have just arrived and so do not know anything about the plans for this meeting, and I would rather someone else act as chairman.

Mr. FISCHER. Mr. Palmer knows as much about the plans as any member present, and I certainly hope he will be elected.

Mr. Palmer was elected temporary chairman by acclamation, and assumed the chair.

Mr. PALMER. I know absolutely nothing about what the secretary has planned for this meeting, and I shall simply say that I am glad to be with you again and glad to see so many here. Perhaps I shall have something more to say later. We will now proceed with the roll call.

The secretary called the roll, the following-named members being present:

Mr. BECK, Illinois.
Mr. BENT, Colorado.
Mr. COOK, Georgia.
Mr. FISCHER, Washington, D. C.
Mr. HAARER, Michigan.
Mr. HASKELL, District of Columbia.
Mr. HILL, Kansas.
Mr. MATTHEWS, West Virginia.
Mr. PALMER, Massachusetts.
Mr. PETTIS, Rhode Island.
Mr. REICHMANN, New York.
Mr. RICHARDSON, Virginia.
Mr. STAFFORD, Vermont.
Mr. THOMAS, Ohio.
Mr. WALL, Pennsylvania.
Mr. WELD, Iowa.

After the roll call the chairman asked for the report of the executive committee.

Mr. FISCHER. I wish to submit a draft of a set of laws that has been prepared by the executive committee for discussion at this meeting. I will read the provisions if it is so desired.

The CHAIRMAN. Perhaps it will be best to do that when we take up the general discussion. Has the executive committee anything else to report?

Mr. FISCHER. I might also report that the question of getting the opinion of the Attorney-General as to whether Congress has the power to enact legislation making the use of false weights or measures in any part of the country an offense was referred to the Department of Commerce and Labor and by the Secretary referred to the Solicitor of that Department. It was deemed by the former Secretary that the Solicitor was competent to pass on the question, but up to the present time we have received no report from him. The gentleman to whom the question was referred has vacated the office, and it has since been referred to Mr. Earle, the present Solicitor. I understand the Secretary of Commerce and Labor will give us the opinion of the Solicitor this afternoon when we call on him. I might also announce now that we have an engagement this afternoon at 4 o'clock to meet the Secretary. He will no doubt give us some of his own views on the questions we are here to discuss. I would like to announce further that at 1 o'clock luncheon will be served here at the Bureau; so the gentlemen may understand this and not make any other arrangements.

The CHAIRMAN. The next thing is the reports from the delegates.

Mr. FISCHER. Heretofore it has been the custom of the delegates present to make a report. The information given in the reports is extremely valuable, not only to the Bureau, but to the other delegates. It is of course interesting to those delegates from States in which nothing is being done to find out what is being done in the other States, and especially in those States in which a great deal is being done. I think a very valuable part of our meeting is this exchange of experience which makes it possible for us to find out what is being done in the various States. That is principally what we had in mind when these meetings were arranged.

The CHAIRMAN. I will call on Mr. Yoder, of Montana, to report on the conditions in his State. This will, I believe, be the first time that Montana has been represented.

Mr. YODER. Mr. Chairman, Montana so far has not paid attention to the standards of weights and measures. While we have laws on

this subject, we have not very many, and no law has ever been enacted by the legislature to carry them into effect. I am here for the purpose of listening to those delegates who have been here before and learn what they have been doing in their States. I thought perhaps I could take home something with me that would be beneficial to us. Montana has not even a set of balances or measures. When I first went to the capital as an officer, there were requests made for tests, and when I looked into the matter was advised that the balances were stored away in a certain vault in the capitol building, but I found there were none there. I had been told that the Government at Washington would be pleased to furnish us with a set of balances. However, I suppose we have not taken it up in the proper manner to get balances. I thought by applying to our Representative and Senators that the standards might be furnished. If the matter were put before our legislature in the proper light when it meets again, I believe very helpful laws might be enacted. I believe the State of Montana will be perfectly in accord with the other States to enact uniform laws to bring about such measures as will tend to compel people to use correct weights and measures. That is all I wish to say at this time. Perhaps after hearing from the other States I may be able to talk more particularly.

Mr. PETTIS. I always supposed that the Government had furnished every State with standards.

Mr. FISCHER. All the older States have been, but three or four of the newer States have not.

Mr. RICHARDSON. Mr. Chairman, I would like to ask a question of the member who has just taken his seat. He says that the United States Government furnished each State as it came into the Union with a set of weights and measures. Is that correct?

Mr. FISCHER. Weights, measures, and balances; that is correct, Mr. Richardson; but here it appears that balances have not been supplied.

Mr. RICHARDSON. There is no law compelling a State to use them after receiving them; that is, it is altogether optional with a State whether it adopts the weights and measures furnished by the National Government?

Mr. FISCHER. Yes.

Mr. RICHARDSON. That is what I wanted to find out. We will suggest to the member from Montana through our executive committee a plan as to how he should proceed in this matter.

Mr. YODER. Mr. Chairman, just one word more. In the State of Montana there is no sealer of weights and measures appointed.

The secretary of state is ex officio sealer of weights and measures, and because he has no deputy to assist him perhaps accounts for the fact that no more has been done. Those States having a sealer of weights and measures to look out for that alone are better prepared to tell us how we should proceed.

The CHAIRMAN. For the benefit of new delegates I would be very glad to give any of them any information about Massachusetts law that I can. We have a compilation of the laws relating to weights and measures revised to within two years. A new edition is to be issued very shortly, and if you will give me your name I will be very glad to mail you a copy. I will not undertake to say anything about our old laws, because most of you have heard so much about them. I will simply mention one or two things which we have done in Massachusetts this year.

We have had quite a number of weights and measures acts passed; that is, more than we have had for some years. In Massachusetts, as you perhaps know, the weights and measures department is under the direction of the treasurer and receiver-general of the State, he being sealer of weights and measures ex officio. At my suggestion he made a recommendation to the legislature this year in his annual report that the office be divorced and that it be made a separate commission. He also made recommendations for the enactment of more stringent laws regarding false weights and measures. The bill for divorcing the department of weights and measures has been drawn up, but I do not have a copy with me, as it has not been printed. It is now before the ways and means committee. I was before the committee on mercantile affairs, which favorably reported the bill unanimously. It calls for the establishment of the office of commissioner of weights and measures, with an inspection force of four inspectors, designated as inspectors of weights and measures. They take up the present function of the deputy sealer of weights and measures of the State. I have every reason to believe that the bill will be passed. It is before the ways and means committee simply waiting for a hearing until I get back from this conference. I believe that the committee will report it practically as it is.

We also had a law passed relative to uniformity of seals of the sealers of weights and measures. I find in some of the cities where we have inspection of milk jars carried out quite thoroughly, thousands and thousands of jars being tested, that some of the milk dealers have been marking their jars with the sealer's mark, and under the present laws of Massachusetts it would be hard to convict

them. We would have to try them under the general law for impersonating a state officer, which is a very roundabout way of getting at it, of course. The proposed law is quite short, and I will read it to you.

And whoever, without being duly authorized to do so, impersonates a sealer or deputy sealer of weights and measures by the use of a seal or otherwise, or has in his possession an imitation or counterfeit of a seal used by a sealer or deputy sealer of weights and measures, shall be punished by a fine of not more than fifty dollars.

The state treasurer under the present law is the state sealer, and my title is that of deputy sealer. Of course, if the bill establishing a department of weights and measures becomes a law, the commissioner will assume all the responsibilities that are now put upon the deputy sealer. But under the existing law we had to pass it with the provision that the deputy sealer should perform such functions.

Here is another law which was passed and sent to the governor April 9, 1907. It is an act relating to the sale of coal in small quantities. Our previous law provided for the sale of coal in quantities of 100 pounds or more by weight and for less than 100 pounds by measure—that is, by the bushel or half bushel—and bushel baskets and half-bushel baskets had to be sealed. We found that was rather unhandy for some of the dealers. They complained at length about it, and so we had this law passed, which provides that all coal shall be sold by weight. For coal delivered in quantities of less than 100 pounds it is not necessary to have a weight slip accompany the bag. The law reads in part as follows:

Such bags or baskets shall be plainly marked with the name of the person who puts up the same and the weight of the coal therein with words in solid roman capital letter at least one inch in height.

We have another act, but I do not seem to have it here, which is one of the broadest and best acts we have had passed this year. It provides against, and makes it a criminal offense to give, false weights and measures. In previous instances where we found persons had been given short weights and measures we have had to proceed in one of two ways—one for the obtaining money under false pretenses and the other for larceny—and of course the procedure in the latter case is very unsatisfactory where the larceny is small. It is a long drawn out process, and while we have prosecuted any number of cases it is very undesirable because the sealer of weights and measures does not want to devote his time to it, especially in places where paid by fee.

We have a law on the statute books, signed by the governor some time this month, which provides that it is a criminal offense to give

false weights and measures. It is not necessary to prove intent. Most of our laws in Massachusetts are encumbered with that word "intent," and in a great many instances it is hard to prove. The new law simply says "whoever gives false weights and measures shall be punished by a fine in the first instance of not more than fifty dollars, in the second instance of not more than one hundred dollars, and in the third of not more than fifty dollars and six months in prison." The penalty is very severe, and I questioned whether it would pay or not, but it did; there was no question about it.

The other bill which is before the legislature now is an act providing for the testing and sealing of weights and measures, etc. I will read it to you.

SECTION 1. The provisions of chapter sixty-two of the Revised Laws relating to the adjusting, testing and sealing of weights, measures and balances shall apply to all scales, balances, computing scales and other devices having a device for indicating or registering the price as well as the weight of the commodity offered for sale. All such computing devices shall be tested as to the correctness of both weights and values indicated by them.

SEC. 2. A sealer or deputy sealer shall seal such devices when tested and found correct, or shall mark condemn or seize such devices if incorrect, in accordance with the provisions of said chapter sixty-two applicable to weights, measures and balances, and all penalties imposed by said chapter for violation of the provisions thereof relating to weights, measures and balances shall also be applicable to such devices.

At the present time in Massachusetts the sealers of weights and measures in the various cities and towns test the pound and ounce values but pay no attention to the computing value on the chart which shows the money value of the article weighed. He puts on the seal, and the natural supposition of anybody who looks at it is that the seal covers the money computations as well as the pound and ounce values. This has been a hard-fought measure, but at the present time it has passed successfully one branch, the senate, and is now before the house for action, having passed two readings there, and will come up this week for the third, and will be held over until I get back.

The constitutionality of the bill has been raised and the matter has been referred to our attorney-general for an opinion. One of the scale companies which is affected by it wished to have two amendments attached to the bill, which in my opinion would kill it, and that matter has been referred to the attorney-general for opinion as to what the effect on the general bill would be if the amendments are passed. All these bills are very important, especially the false weights and measures bill, a bill which I think should be passed in every State.

There has been great interest taken in the question of weights and measures in Massachusetts. This year I have spoken before quite a number of different associations in relation to this subject, and only within the last two weeks I spoke before the Massachusetts Retail Grocers' Association, and they got very enthusiastic over the matter. That was rather a surprise to me, because my work during the past year has been largely among the grocers, and I expected to have considerable opposition to any weights and measures bill which we might have before the legislature, especially this computing-scale bill, because there is something like 5,000 of them in use in Massachusetts to-day, and this bill as passed will undoubtedly have some effect of changing the present system of using those scales.

I expected some antagonism, as I say, but they got very enthusiastic about it there. They found that the sealer of weights and measures was cooperating with them; they found he was going to be of very great assistance to them in passing any legislation which they might want—for instance, national legislation, something touched upon in previous conventions here, and something which I think we will have to take up before very long; that is, some laws on interstate package, or interstate customs of trade, which came up in connection with the pure-food bill. I think if the bill had been generally known to the grocers' trade, what the effect of it would be, that the clause which was stricken out of the bill would have been adopted. At the present time in our State the grocer or merchant who sells goods which do not have the net weight on the package is very liable to be tried under the present laws, because customs and trade establish certain commodities to be sold by weight, and naturally the customer or purchaser comes in and asks for a given quantity of goods, such as a pail of lard. He will ask for a 2, 3, 5, or 10 pound pail of lard. As a matter of fact, my examinations in the State show that very few of the pails of lard which are supposed to hold 3, 5, or 10 pounds do hold them, the 10-pound pails holding in many instances $8\frac{1}{2}$ pounds. It is the custom of the merchant to charge for the same quality of lard in pails 1 cent per pound more than is charged for that sold from tubs. But that is only one case. There is print butter, for instance, which is ordinarily sold as 1 pound and one-half pound prints. I have found, notwithstanding the fact that we have had quite a number of inspections for two or three years in our large cities, that creameries have been selling butter as a pound which weighs from 13 to $14\frac{1}{2}$ ounces. In some places they have been found 5 ounces short, 5-pound boxes holding 4 pounds and 12

ounces, or 4 pounds and 11 ounces, or, in one instance, 4 pounds 9½ ounces. Now, the grocer or merchant sells this in response to an inquiry by the customer for 5 pounds of butter, and a price is charged accordingly, therefore the grocer is liable for larceny because he deliberately sells the customer 4½ pounds. As a matter of fact, the grocer sells the goods exactly as he received them. He is the innocent party, therefore the grocers ought to support any movement which makes for honest weights and measures, and I know that in our State the grocers and merchants are awakening to the state of things. Since I have been at Worcester, at this Massachusetts convention, I have been invited by the grocers' associations of Vermont and New Hampshire to talk to them on the same subject.

The executive committee of the Boston Retail Grocers' Association, which is one of our largest organizations there, has told me that in any legislation regarding weights and measures we have before the legislature the grocers' association will be glad to help and be very glad to go before the legislature itself with their indorsements. At the meeting which I addressed and to which I have referred, they adopted a resolution favoring bills for honest weights and measures.

It simply shows that the merchants themselves are beginning to wake up to the matter, and when I began to quote some statistics to show them some of the inspections I had made there, showing the number of pounds of butter sold daily throughout the State and the number of instances of shortage, they themselves realized the necessity of some such legislation as this. I think it is a very good plan for the sealers of the different States, and those who know something about weights and measures, to go before some of these organized bodies and tell them some of the facts in relation to weights and measures. That is one of the hardest things which I have to deal with, to educate the public up to the fact that they are actually being cheated. I know that Mr. Pettis, of Rhode Island; Mr. Reichmann, of New York; and Mr. Haskell, of the District of Columbia, will bear me out in this statement. It is really surprising to see people come to my office absolutely ignorant of the fact that false weights and measures are being used all over the country. I do not recall anything else at this particular time that I want to say. This is a practical report of the general conditions in the State of Massachusetts at the present time, and the progress we have made there during the present year. I may mention other things later as they come to my mind.

Mr. REICHMANN. I want to ask a question. What office do you hold—are you sealer of weights and measures in Massachusetts?

The CHAIRMAN. I am deputy sealer. The state treasurer is by virtue of his office sealer of weights and measures ex officio. As a matter of fact, it comes under the treasurer and receiver general. That was owing to the fact, as I understand it, that at the time the standards were furnished by the United States, the state government looked about for some bonded officer to charge with the care of standards. The state treasurer was practically the only bonded officer.

Mr. FISCHER. All the Federal Government did was to turn them over to the governor of the State, and he selected a proper custodian.

The CHAIRMAN. I suppose it was because the treasurer was the only state officer who was bonded. We in turn when we issued our standards to the various cities and towns throughout the State, issued them to the care of the town and city treasurers, they being the only bonded officers. As a matter of fact, the entire responsibility and the charge of the work in Massachusetts was left to me. I will be glad to answer any other questions.

Mr. RICHARDSON. I hope you will request speakers who follow to say what office they hold in their State or what office the sealer is under, to save asking questions of each one as they address us.

The CHAIRMAN. That is a very good suggestion, and will the delegates please bear it in mind. I shall now call on Mr. Bent, of Colorado.

Mr. BENT. Mr. Chairman and gentlemen, my office is that of state treasurer of Colorado, and the constitution of our State provides that a state treasurer shall not succeed himself. Therefore we change our state sealer every two years. Last January our governor received a communication from the Director of this Bureau sending copies of the reports of the previous meetings held by this organization, which was the first information I had, or that the present governor had, that we had a state sealer. Our laws are quite complete, yet inoperative. They are quite severe, providing severe penalties for infractions relative to improper weights and measures. After having received this communication from the Bureau of Standards, I began to investigate the matter, and discovered our set of standards stored away in the subbasement of the capitol with every evidence to show that they had never been used. Our laws, I think, are very deficient in that they provide for county commissioners to select county sealers without making any specific provision for the city sealer and his duties. The state treasurer is not, under

our statutes, clothed with any authority, and therefore the law has become absolutely inoperative. We have later passed statutes providing for the inspection of coal-mine outputs, and the weights of coal to be used by our coal-mine inspectors, in disputes that might arise between the miner and the operator of coal mines. We also have elaborate laws relative to the measure of water for irrigation, and our state engineer with his deputies is very efficient in measuring water. But the very important question of giving the public a square deal on weights and measures on our commodities has been sorely overlooked in Colorado. With a view to being in a position to intelligently advise this body when I reached here, I sent communications to all the county clerks throughout the State asking them a list of questions, and, similarly, I sent the questions to the mayors of the principal towns and cities throughout the State. The questions were asked with a view to getting some condensed information as to the condition of affairs in our State. I presume that is what this meeting is desirous of learning in every State. The questions were as follows:

Have you a sealer of weights and measures? If so, where did your city procure a set of standards? Who inspects your set of standards? Is your sealer paid a salary or fee? Please state salary. Please state fee. How often does your sealer inspect weights and measures? Does your present system of inspection in your judgment properly protect the public? If not, what would you suggest? Please answer by return mail.

Similar questions were sent to county clerks referring to county sealers (we have 59 counties), and the essence of the answers received was that there were no sealers in 49 out of 59 counties in the State. This goes to show that the county commissioners paid little attention to the present statutes relating to the appointment of county sealers. The fact was also disclosed that none of our towns and cities have sealers, with exception of three or four of the larger ones. The cities of Denver, Colorado Springs, and Pueblo are the only ones which have any sealers, and Denver seems to be the principal city in which we have any attempt at regulation and inspection. I conferred with the mayor of Denver, who is a very up-to-date and progressive man, but he had not become thoroughly versed with the machinery in connection with the sealer. However, he advised me that they had a sealer to whom a salary was paid, and that a fee was charged merely sufficient to pay the expenses of the office. The sealer is supposed to make the rounds once a year. Of course, you gentlemen who are thoroughly familiar with this business know better than I whether

that is sufficient and protects the public. I do not think it does. I think that that is a most unfortunate condition, and what brings me so far East is that I feel deeply interested in aiding Colorado in securing the advantage of the information that might be derived from this conference and others, and also the advantages that the Federal Government holds out to the States which desire to take up the question in a scientific and systematic manner. I mean a manner which will produce results. I shall be very much interested in learning all I can at this conference, and I should be glad to hear from the gentlemen who have come directly in contact with the detail work, because there are many questions that doubtless will arise in connection with the detail work of a sealer with which the layman is not familiar. I think that this is a straight business proposition, and when it comes to the details of the question they should be handled by technical men. But the broad question of getting the people of the various States interested in protecting themselves is what appeals to the man who feels the interest of the people of his State, and the man who is in a position to interest the people of his State. By this method of inquiry a change has taken place in the city of Denver within the last two months.

The system of inspection of weights and measures has been really improved, and I think the city of Denver is now in a position to take the work up actively, and I think likewise throughout our entire State, every tradesman, every legitimate tradesman, in every line would welcome proper inspection of weights and measures. Every manufacturer in every line should welcome standard packages, throughout this Union. I should be glad to cooperate with this organization so long as I am connected especially with this work, which when elected I did not know was a duty of mine.

Mr. BECK. I might say for Illinois that the law there makes the secretary of state the sealer ex officio. Also, in connection with that, each county clerk is ex officio sealer of the county. The duty of the state sealer is to test and mark certain sets of scales, measures, and weights for the various county clerks who provide for testing weights for dealers. That is as far as the law is enforced in the State of Illinois. The secretary of state has no authority to prosecute; he is simply there to test the weights and measures for the county sealers. As superintendent of the state capitol for the last ten years, it has been part of my duty to look after the details of this work. There are probably 75 out of 100 counties that have never made a request

upon the state authorities to have a set of weights and measures tested. Various municipalities have sets which they have had tested at the state capitol; but aside from that this is about as far as the weights and measures question has ever been discussed or handled in our State.

I have with me a copy of the state law, which I will leave with the secretary, in case any gentleman would care to look it over.

Mr. FISCHER. I would like to ask Mr. Beck whether the present law differs from that given in the compilation prepared by the Bureau of Standards two years ago?

Mr. BECK. No; there has been no change. On receiving the synopsis or digest of laws that was sent us by this Bureau we prepared a bill and did submit it at the last legislature, but found it was so near like the old law that it was not pushed.

The CHAIRMAN. We will now hear from Mr. Cook, of Georgia.

Mr. COOK. Mr. Chairman, the State of Georgia has not been represented at the previous conferences which have been held, not from any lack of interest that we felt in the subject, however. Last year the representative appointed by the governor was prevented from being here at the appointed time.

We do not have in our State what is known as a state sealer. Our law requires the governor of the State to procure and furnish to the ordinary of each county (some States call that officer the probate judge) a uniform set of weights and measures, and this has been done. A year ago we divided up our State and made nine more counties. We have since that time furnished those new counties with standards. Our laws on the subject of weights and measures are based, I believe, in every respect, as far as they go, upon the standards of the United States Government. But they do not go far enough. For instance, we have no law upon our statute books for the measurement of electrical power used by manufacturers and consumers of light and heat in the larger cities. That is a matter that is handled absolutely by the parties who own these plants. They make their measurements and charges. We pay for what we get, and oftentimes I feel that we pay for a good deal we do not get; but I do not know. It is a new thing, and our law has never covered that point.

The ordinary of each county is furnished, as I said, with standards of weights and measures, and they are required under the law to test each year the weights and measures, and oftener if they deem it necessary, of merchants and others who use weights and measures in their business. In our larger cities we have city weighers appointed by

local governments. Their salary is paid by the city. They weigh coal, but their duties extend no further than that. All coal that we consume in the city of Atlanta is weighed by city weighers, and we feel pretty well assured that we get the quantity that we pay for, and that we get good protection.

Georgia feels an interest in this subject. Her representative to-day knows very little about the subject, and is here desiring to learn more from the gentlemen who have attended previous conferences, and I desire to state that we will be very glad in our State to cooperate with the other States in this matter.

A great trouble that now exists is the lack of uniformity in the various States as to what constitutes a bushel. For instance, in my State I can buy a bushel of corn of 56 pounds, and if I sell it to my neighbor across the Alabama line I have to put in 2 more pounds of corn in order to make it good, as he wants 58 pounds; and that discrepancy exists more or less with various other commodities.

I am very sure that I do not know anything that I can say to you gentlemen that would enlighten you upon this important subject. I am here more to be taught than to try to teach.

The CHAIRMAN. I know that Mr. Haskell, of the District of Columbia, has something interesting to report to us. We will be glad to hear from him.

Mr. HASKELL. Mr. Chairman and gentlemen, I have prepared a little paper or talk upon these matters that I am expecting will be here in a very short time. I do not know that I have anything to say that the paper will not cover.

On page 79 of the large book you have before you (Laws Concerning the Weights and Measures of the United States, 1904), you will find a report that covers the situation in the District of Columbia pretty thoroughly. There have been some little changes in that law since the book was published, but not material changes. The penalty in the District of Columbia for selling by short weight is very severe, as high as \$100 fine for each offense, and also imprisonment not to exceed six months for nonpayment of the fine. We find that the public is certainly protected and saved from a great loss by the enforcement of the laws in the District of Columbia. We have the hearty cooperation of the Commissioners of the District of Columbia, and of Congress, whom we are directly under; and also of the police court.

But this little talk that I have prepared will perhaps illustrate some matters pertaining to the inspection, sealing, etc., in the District that may be of interest.

The CHAIRMAN. The next gentleman to be heard from is Mr. Weld, of Iowa, whom we are glad to have with us again.

Mr. WELD. I made my maiden speech here two years ago, and unfortunately for myself was detained from being present at the meeting of the association last year.

In response to the suggestion that we label ourselves in advance, I would say that the office I hold is state superintendent of weights and measures in Iowa. This is a separate office created by the constitution and rewarded with a salary of \$50 a year. The holder of the office is required to furnish a bond in the sum of \$5,000 a year. As I never ask private parties to go on my bond, it has cost me about \$10 or \$12, and this leaves me a net profit of \$38 or \$40, as a salary, which serves no purpose whatever except an occasional trip to Washington like this, which is very much enjoyed.

The history of the matter is that the office is connected with the State University of Iowa, by the removal of the capital from Iowa City to Des Moines in 1858. The office was connected with the state administration of Iowa City, and on the removal of the capital to Des Moines and the location of the university upon the old capitol campus, the office was left there and a little building for the accommodation of the students was used.

The question of supervision of the weighing and measuring of commodities seems to be a very broad one fundamentally. It goes to the very root of the whole question of commerce and trade. Our legislatures and our National Government have been at great pains to pass pure-food laws, and these laws are no more important, as a matter of fact, than those which are intended to procure the exchange of proper quantities of the different commodities in question. It makes no difference whether one house in its competition with another gets ahead of it by adulteration or short weight.

This whole question of fraud in exchange is largely due to the keen competition between manufacturers and jobbers in commodities. I do not think it is fundamental or to any great extent an index to the dishonesty of the American people. If we look into the matter a little, as I have done quietly, since attending the last convention, we find that the offender is not the retail merchant. The retail merchant is very anxious to sell 16 ounces for a pound. He wants to know, and is very glad to know, if his scales are defective, at least that is the experience we have with our people. Of course, in Iowa we have few large cities, and I think that is an advantage to us. The large cities contain a great class of ignorant people—an element which can be

imposed upon—and that is where most of the mischief is done. With us the people know one another very well, and the idea of cheating in that way would hardly occur to anyone, because it could be so easily detected.

The question of package goods, however, is one that needs to be looked after. We can buy a package of soda biscuits for 5 cents in Iowa—I do not know if it is the same in the District of Columbia—but I do not know how much a package of soda biscuits weighs. And the trouble is, I do not care. I suppose that is the great point with the question of package goods. We simply buy them because they are convenient in form, convenient to handle; they are in good condition in these packages, and we simply buy them without regard to what they weigh. In Iowa there is no law requiring that package goods be stamped with their net weights.

Mr. HASKELL. We pay about 6 or 8 cents a pound for these crackers.

Mr. HAARER. They cost 8 cents a pound in boxes.

Mr. WELD. Now, what we want in my State is not so much this sort of legislation. We do not want legislation where it is necessary to have sentiment aroused. We have law enough to cover the situation. We want something to control the gas companies, electric-light companies, and water companies, who are charging for power and service nobody knows what. I do not know whether I get a thousand cubic feet of gas when I pay for it or not; I do not know anything about it. We have no means of testing our meters. I have no reason to believe that I am being cheated, but I have no means of knowing. It is the same with the water meters. There is no official inspection of water meters. I do not know that there is any law regarding inspection. The water companies and gas companies do inspect their meters. Whether the work is honestly done or not is a matter of opinion. My opinion is that in most cases it is honest, but we are simply at the mercy of these companies. And now that electric light has come into use so largely a standard is certainly necessary, and we have no means of securing it. We want laws to cover these points. In fact, it seems to me we need this whole subject of inspection of commodities and apparatus reorganized and put under one heading. It all properly belongs together, and should come under one head. There is ample room for a state officer to devote his whole time to the matter of organizing this inspection.

Once in a while we have a prosecution that is of a radical nature. In one of the towns of Iowa, since I was here last, a peddler was prosecuted for selling a short half bushel of apples. I got a telephone

message one night calling me to this particular town to testify as to whether or not it was a correct half bushel which this peddler had. The half bushel was one of those so-called fifth bushel baskets that fruit dealers sell fruit in, and he had used that as a peck measure and sold apples in it. Of course, he may have known what he was doing, and he may not. I have an idea that there is a good deal of that going on; I am sure there is. I believe that in this particular case the prosecution was due to a sort of anti-Hebraic sentiment, more than anything else, as the man was a Jew. He was prosecuted and should have been convicted so far as the use of the false measure was concerned, but the fact is that the county in which this offense was committed was one of the counties in which there are no county standards of weights or capacity; they knew nothing of them at all. Consequently the man was simply excused by the jury on account merely of having no means of testing the measure.

This is a matter in which public sentiment has to be aroused, simply a matter of policy. I do not think the difficulties which we find are due to dishonesty.

Of late years I have been keeping in the office a ton of iron test weights, and I have had several calls for them. I am constantly getting correspondence which shows that there is no general knowledge as to the proper channels through which to seek relief. It does not seem to be generally known that the counties should appoint sealers of weights and measures, and that the proper course for the farmer who wants to know whether his scales are correct or not is for him to go to the county sealer. I frequently have calls from farmers and merchants wanting to know how they should proceed to have their scales tested; and when I reply that they should go to their county sealer, they say that they have none. I tell them that they must get their board of supervisors to appoint one; but they will not do it because it costs so much. These men do not like the expense of \$200 or \$300 that is necessary to set up the county sealer in business, and then the payment of his stipend, whatever that may be, in addition. They simply do not feel that conditions warrant this expense. They leave it for the next administration to do, and present a very economical budget on their own account. Of course, in such a case as that I simply say to these men, "You have no adequate protection; no adequate inspection. I am not authorized to come out and inspect scales; it is not my business. My only duty is to see that the counties are provided with sets of standards when they are applied for." To persons requesting to have scales tested, I say: "If you want a ton of test weights to satisfy yourselves, and will pay

the freight on them, I will send them along." I simply see that these weights are kept in order, and they go about here and there doing service. That is no inspection, of course; but I have reason to believe that as far as it goes it is inspection. These are intelligent men and can tell whether or not their scales are correct, up to a certain limit. It is honest enough as far as it goes. The very way inquiry is made shows it is with honest intention.

I saw a device the other day, which was shown to me on the train by a man with whom I was talking. He was a stranger to me, and was led on in utter ignorance of the fact that I had any interest in such matters. The device simply dumbfounded me, and I wish I had it to show to you. Perhaps some of you have seen it. It is exceedingly clever, and it may be worth while for you to understand it. It consisted of a little piece of steel made to fit over the edge of a balance or scale, and was thin on one side and thicker on the other [illustrating on blackboard]. You can easily see that a beam or bar resting upon the knife-edge could be shoved from one side to the other by simply capping the knife-edge of the balance with that little steel cap.

Mr. FISCHER. Was he trying to sell it?

Mr. WELD. No; I tried to find out about it, and fear I showed too much interest at the outset. I tried to get hold of it and find out what he was doing with it, and he showed me the outfit, and said that he had picked it up somewhere, but did not tell me where. I rather suspected he was a commercial traveler.

Mr. REICHMANN. It was a patented article, I presume?

Mr. WELD. No; not a patented article. As he was a commercial traveler, I suspected he was putting his customers onto this little trick of shifting their scales and changing the leverage without it being appreciable and by methods which could easily be removed so that no inspector could detect it.

Mr. FISCHER. I might say that one thing, or the principal thing, that led the Bureau of Standards to take up the subject of weights and measures inspection was the large number of inquiries we used to get from local authorities, local sealers, and individuals in the various States, wanting to know where they could get their weights and measures inspected. They seemed to think that was a function of the Government; and apparently no provision had been made in various States to do this, in some of them at least.

There is another thing Mr. Weld spoke of that seems to be a very common difficulty to overcome, and that is the indifference of the people. It has gotten so now that people rather expect to be cheated.

It seems that way. They do not expect to get more than 14 ounces for a pound, and they do not seem to care whether they do or not. They say, in fact, if you require full weight we will have to pay for it. I have heard a similar criticism of the pure-food law. A number of people find objection to it here in the city now because prices of commodities have gone up. The dealers have to charge more, and some people object because they have to pay it. In other words, some housekeepers would rather have something that is impure and pay less than to get a pure article and pay what it costs.

Mr. PETTIS. The people in Rhode Island want 16 ounces for a pound.

Mr. REICHMANN. It is my experience in weighing commodities sold to retail trade that people pay more when they get 14 ounces for a pound than when they get 16.

Mr. FISCHER. There is no doubt but what the whole thing breeds a spirit of dishonesty. It has gotten so that a man can not be in business and be honest, to tell the truth. In other words, to give full weight he has to charge more, and people are apt to go to the man who makes the cheapest price.

The CHAIRMAN. Professor Weld spoke about packages of Uneeda biscuit. At the convention at which I spoke, and to which I have referred here, the president of the National Retail Grocers' Association was there, and spoke, and made a point of it with considerable pride that the executive committee of their association had been able by a conference with the National Biscuit Company to bring about a reform in the selling of packages in bulk, that is, in cans of 5 and 10 pounds. Previous to this agreement with the National Biscuit Company the grocers had been compelled to pay for the cardboard separating the layers of crackers, which was weighed with the product. The agreement provides that the net weight of crackers only will be charged for. The president of the association very forcibly brought to the attention of the delegates the fact that once in a while they should weigh their packages and find out if that custom still existed in different sections of charging for the cardboard.

The CHAIRMAN. The next on the list is Mr. Hill, of Kansas.

Mr. HILL. I am in the department of physics at the University of Kansas, and am here as the representative of Chancellor Strong, who is, by the law of the State of Kansas, ex officio state sealer of weights and measures. There is no provision made for a deputy state sealer, and what little work has been accomplished has been done by one of the inspectors in our department.

The State was supplied with a set of standards some years ago. Part of those standards have been for a long time in the possession of our department, and part of them were found last January at the state capitol, at Topeka. The metric standards of mass had been put on exhibition there. They had been originally sent out in a case; this case had been opened so that the standards could be seen. While at present our standards of capacity are in pretty good condition, the standards of mass are in very bad condition. The standards of length are probably in good condition, and need not be tested. The legislature gave an appropriation with the university appropriation last February, which will enable the chancellor to reequip the State with an up-to-date set of standards. The learning of the requirements is one thing that brought me here at this time. There has been very little done in the State. So far as I can find out from the men who have been doing the actual comparing, there has been one 50-pound weight and one 10-pound weight sent in for comparison. There have been a number of letters of inquiry received from various counties that were from time to time becoming aware that they had a county sealer who was liable to a fine of \$50 if he failed to provide himself with a set of weights and measures which were to be compared at the State University. There were some half dozen of these letters received. Reply was made stating what the law required and where proper standards could be gotten, and so far I do not know that any of those men have acknowledged our letter of instructions.

This is about the condition up to date of the standards in the State of Kansas. I think, with the other gentlemen, that the standards of some other commodities, such as water, gas, and electric power, should also be taken up. In Kansas, as in Iowa, we have no large cities, no city of over 50,000, and I think most of the trouble, when it does occur, takes place in the larger cities. I do not think there is much intention to defraud in the State of Kansas. But as I have said, the question of weights and measures is to be taken up and new equipment supplied.

THE CHAIRMAN. We would now like to hear from Mr. Woolf, of Maryland.

MR. WOOLF. Mr. Chairman, in Maryland we have very little inspection other than in Baltimore city, where I am chief inspector of weights and measures, in addition to my duties as clerk to the city comptroller. The sealers there are termed inspectors of weights and measures, and a recent ordinance has placed them upon a salary basis, instead of fees, as in the past. Some few years ago some councilmen

tried to abolish inspections entirely by authorizing the district inspectors to bring to the office all weights and measures they found defective, and they brought about 1,600 to the office in one year. Last year by confiscation of these measures we had only about 300. We had only ten arrests last year for giving false weight and measure; and only three complaints throughout the city of persons giving false weights. So far this year we have had only one. I do not know of anything else I can say of interest.

Mr. RICHARDSON. Before you take your seat I would like to ask you a question. You state in your remarks that Baltimore had a sealer; what about the State?

Mr. WOOLF. We term them inspectors there. The State has no sealer. There are local conditions that provide for them if we want them; but there are none. In the coal-mining region I understand there is one; and there are weighers of hay near the large cities and towns, who are appointed by the governor of the State.

Mr. PETTIS. These acting as weighers have nothing to do with weights and measures?

Mr. WOOLF. No; there is no other inspection done except in Baltimore.

Mr. FISCHER. I have been told, Mr. Woolf, that the practice in Maryland, among some people, at any rate, was to water the hay.

Mr. WOOLF. I never heard of that. I live too deeply in the city to know anything about hay.

Mr. FISCHER. We have this testimony from citizens in the State of Maryland.

I also want to ask, Mr. Woolf, in regard to the size of oyster baskets. Is there any such standard as a bushel basket?

Mr. WOOLF. They sell them by baskets; wire bushel baskets.

Mr. FISCHER. Are they supposed to contain a bushel?

Mr. WOOLF. Yes; they have to be wire or of sheet iron with inch holes.

Mr. FISCHER. Is not that rather a new law?

Mr. WOOLF. No; it was passed about ten years ago, I suppose.

Mr. RICHARDSON. You will find that on page 182 of your edition of state laws.

The CHAIRMAN. The next on the list is Mr. Haarer, of Michigan.

Mr. HAARER. Mr. Chairman, in Michigan the state treasurer is the state sealer of weights and measures, and as deputy treasurer I become the deputy sealer of weights and measures. There has been nothing done in our State in regard to this matter. Two years ago the former deputy, Mr. Fowler, was here, but in a few days after he

returned from the conference he resigned, so the department lost the benefit of his trip.

I came here mainly to be enlightened on the subject, because I think it is a matter in which the people should be very much interested, although I think as a rule they are not.

Our law provides that the county clerk of each county shall be the county sealer of weights and measures. We have 83 counties, all of which I think have no standards of weights and measures. About two weeks ago I compiled laws on the subject, which are somewhat antiquated (I think passed in 1845 or thereabouts). I compiled them in small pamphlet form, and mailed a copy to each county with a circular calling attention to the pamphlet, stating that we had the standards of weights and measures in the office and were prepared at any time to seal their weights and measures. In response thereto I received a telephone message from one of the county clerks who wanted to know what it meant, and whether we intended to enforce the law. I told him there was no provision for enforcing the law. "Well," he said, "we will not get them then." From another county clerk I received a letter stating that the supervisors had ordered weights and measures, and that they would be sent direct to our department to be tested and sealed. I think some of the other counties will follow along the same lines.

There is no provision whatever in the law for the state sealer to go out himself, or to appoint anyone to go out, and inspect either weights or measures; and there should be some radical amendment to our present law. I would like to see, and I presume there will be some suggestions made for, a uniform law, which could be introduced in the legislatures and provide a remedy. We are very much at sea with the present system. Our hands are practically tied and we can not do anything. I am willing to listen to suggestions from others. I came here, as I said, purely to gain some knowledge on the subject.

The CHAIRMAN. Mr. Yoder, of Montana, is the next in order.

Mr. YODER. At the beginning I believe I stated how conditions were in our State, so I will not take up your time now.

Mr. RICHARDSON. Please give us your title.

Mr. YODER. State sealer. In Montana the secretary of state is ex officio sealer of weights and measures.

The CHAIRMAN. Mr. Reichmann, of New York, is next on the list. I know he has something interesting to tell us.

Mr. REICHMANN. I have been deeply interested in the subject of weights and measures for a number of years. Last December I was appointed state superintendent of weights and measures of New York.

Conditions in New York State, although we are the most populous State in the Union and should be doing something, have been very chaotic so far as weights and measures are concerned. We will try to pass a bill this year which will more specifically state the duties of the state superintendent of weights and measures, and those of county, city, and town sealers, and definitely impose fines. Heretofore the general law has been only that the duties of the state superintendent were to have general supervision of the weights and measures of the State, compare them once in ten years, and have tested and sealed all county and city standards. In general terms that does not mean anything. Then it gives some provisions making the giving of false weights and measures a misdemeanor, which means that if you want to prosecute anyone you will have to resort to the penal code, an old and lengthy process, quite out of date; whereas in the bill I have had introduced it specifically states that a fine will be imposed in each case, and makes it obligatory upon the state superintendent to travel through the State and see that every county and city is doing its work, and also, what is very important and which should be the case in every State, the state superintendent, as well as every sealer of weights and measures, is made a prosecuting officer so that he can arrest without a warrant. That bill will undoubtedly be passed. Unfortunately, the legislature is not yet through with its deliberations on various other subjects, so I can not report at this meeting a definite result:

The salary of the state superintendent of weights and measures heretofore has been \$300 a year. Dr. Lewis Boss, director of the Dudley Observatory, has been too busy (and very rightly so, because I think he should not have taken his time for such things) to go down and collect that salary for the last five years, for which reason the legislature has not appropriated anything for that department. However, this year I think the ways and means supply bill will go through the senate, probably this week, and will make ample provision for the department of weights and measures.

I had thought of saying some few things on the subject of weights and measures in general, but in view of the fact that there are a number of gentlemen who have not been here before it might be well also to enumerate a few specific instances of short weights and measures, after stating the general condition in the State.

Recurring then to the general conditions, the only three cities which are really doing anything are Buffalo, Rochester, and New York. In the city of New York Mr. Derry is handicapped by the

fact that he has an inadequate appropriation for the department and not a sufficient number of inspectors. Besides the chief of the department and the deputy chief, he has only eighteen inspectors, which, in a city the size of New York, is, you might say, ridiculous.

I followed the scheme which the gentleman from Colorado and those from other places followed, in sending out circulars to the mayor of every city, to every county clerk, and to the clerk of every board of supervisors in the State; and the summary of the answers was very amusing to Governor Hughes, as well as to the gentlemen of the ways and means finance committee, to whom I showed this report.

I do not believe, from my experience in the last four years, that the people as a rule, even in smaller cities, are giving honest weight and measure, for two reasons. In the first place they are not giving the correct weight and correct measure on account of lack of inspection and ignorance on the part of the dealers, which is clearly shown by statistics of foreign countries, particularly in Canada. And secondly, for the reason of the dishonest tendencies of the dealer. If there is no regulation, no constraint put upon the dealer, in the way of having correct weights and measures, it really puts a premium upon the giving of short weights and measures, because in competition even the smallest places (and New York is not any different from any other place) one man tries to outdo another in an endeavor to make a sale. In no case in the experiments I tried have I found that where a sale was being made of groceries or dry goods at cut prices that full measure was given. In other words, sales were made at practically the same price, only they cut down the weight or measure given, and simply bamboozle the people. I take it that the whole question is not a scientific one at all; it is an economic question, pure and simple. It is simply a question of exchange of values. If I pass across the counter a \$5 bill, and the man gives me a pocketful of change, I count every penny of it, as every person would, to see that I get the correct amount. But, if I pass across the counter \$1 for 20 pounds of sugar, and I get 16 or 17 pounds, it is not convenient for me or for any purchaser, to carry around with him certified weights and measures to certify the transaction. Consequently this kind of protection is more necessary than police protection for the people who can not protect themselves, namely, the poorer classes.

This fact was brought home to me very emphatically by a little investigation Mr. Derry made in the city of New York on 100-pound bags of coal. Coal is sold to the poorer classes in bags supposed to contain 100 pounds. His eighteen inspectors found over a thousand

shortages in one week, the average shortage on 100 pounds being about 24½ pounds. That means that the poorer people, who could least afford it, were paying \$12 to \$16 a ton for their coal, and getting only 75½ pounds instead of 100. I mention this simply as an instance. It goes through every commodity that is bought or sold. As an illustration, I went around to see Mr. Woolf, in Baltimore, last fall. After I left his office I bought at a confectioner's stand several ice-cream pails. I have also collected them in Washington, Boston, Buffalo, and Chicago. I have taken them home and measured them, and I have yet to find a pail represented as a quart that will measure over 1½ pints. That is not the fault of the dealer selling them. The purchaser is paying from 20 to 40 cents a quart and is getting only three-fourths of what he is paying for. That is like the case of a merchant I know of who sells goods at cost prices—that is, he claims he does—while he is actually selling at nominally the same price, but is getting rich simply by cutting down on the weights and measures.

I think Mr. Palmer will bear me out in stating that it is almost impossible to find a peddler or junk dealer who has a spring scale which is not false. I had here last year a number of them that I had collected. Since then I have collected over a bushel more of false spring scales. The necessity for a thorough and vigorous inspection of weights and measures is because the people will not protect themselves. It is a very difficult thing to do. Suppose here is a person who knows that he is being cheated; that he is getting 14 ounces of butter for a pound, or, in seven cases out of twenty-four as I found, is getting less than 11 ounces, when he is paying for a pound. Then it is necessary to go in a roundabout way and ask some person to issue a warrant to arrest the dishonest dealer; then ask that person to go to court to testify against the offender. It is almost impossible to get this done. For that reason the sealer of weights and measures should be a prosecuting officer, and be able to arrest without warrant. The state laws ought to be so worded that a definite specific fine will be imposed for each violation. The mere fact that a person has in his possession a false scale or weight, and is selling by it, ought to be sufficient evidence for his arrest.

It is difficult to know where to begin or where to end when speaking of the way people are being defrauded by the use of spring balances and yard measures which are short, and which by the way, are exceedingly prevalent in almost every county. It is almost impossible, at even the smallest places, to find counter tacks 36 inches apart. I have found some less than 33 inches.

The use of liquid quarts for dry quarts is very prevalent, and it is a practice that can not be seen on the face of it. I doubt whether Mr. Fischer, if I were to show him a quart measure could tell without making a careful examination, whether it was a dry or liquid measure, and the layman certainly could not do so.

I think the time has come in New York State when the people are beginning thoroughly to appreciate the importance of this subject. In conclusion I want to say that there is absolutely nothing that will help the cause as much as getting the newspapers behind you. Every newspaper is very anxious at any and all times to get any sort of information on short weights and measures.

If at any time I can be of any assistance, I will be very glad to do so, because I believe it is of fundamental importance for the people to have honest quality and honest quantity, and I believe one is just as important as the other.

Mr. HASKELL. I would like to say a word in answer to the gentleman from New York. While his statements in some respects are not exaggerated, I think in some cases they are. My experience of ten years here in Washington has led me to believe that the people are not dishonest.

Mr. REICHMANN. No, I do not mean that.

Mr. HASKELL. We have to have prisons, and we have to have judges to take care of a class of people who are not honest; but that, in my judgment, does not cover the whole territory or the whole number of people. In the inspection and weighing of coal, our experience has led us to believe that a large percentage of short weight was through the carelessness of the weighmasters. Of course, we have had individual cases and a great many of the intentional short weighing of coal. We have about 4,800 spring balance scales in the city of Washington, and I disagree with the gentleman from New York, for I do not think that 10 per cent of these spring-balance scales are out of order or not up to the weighing of a standard weight; but it is the 10 per cent where the necessity, in my judgment, comes in for the office of a superintendent of weights and measures, to look after that class of people who intentionally try to defraud.

Perhaps it might be of interest to some of the gentlemen (I made this statement I think two years ago) to know the manner in which the business is done in our office. In the first place, we have in the District of Columbia about 5,000 places that we visit yearly. We have in our office a record of those places, giving the kind of business carried on, the number and kind of scales in each, on a card about 6½ by 4 inches, so arranged that it carries five years' inspections. We have

the city divided into routes, so that on each working day of the year we have a certain territory that is covered by the inspectors. When an inspector visits a place of business he has before him on this card a record of the condition as found of the scales or measures in use in that place of business. We have that for the purpose of ascertaining whether in our judgment the intent is to defraud. If we find the same condition a second time in a man's place, we are of the opinion that he is intending to sell by short weight, and consequently we prosecute him.

In the inspection of coal, which comes under the sealer of weights and measures in the District, we have authority to stop a wagon load of coal any time on the street and verify its weight. In other words, the law requires that each dealer shall send out with each load of coal a certificate showing the gross or tare and the net weight of that load of coal, and there is a large penalty for not doing so. We have authority to request that certificate, and then we take the coal to a District scale and verify its weight. Four or five years ago it was seldom that we did not find a load of coal that would be from 40 to 60 pounds, and sometimes more than 100 pounds, short. From our investigations we found that it was largely due to the carelessness of the weighmasters in their hurry to get the load on and off. After a few prosecutions we now have a very much better condition of affairs. To illustrate: Within a month I had two inspectors out on the coal business, and with one exception we found that the coal being sold was up to standard weight, which is 2,240 pounds to the ton in the District. But of course the matter has to be watched carefully all the time. There is no question as to the necessity of it. I do not want to think that all the people are dishonest, because my experience has led me to think and believe that it is the intention of a very large percentage of dealers to honestly deliver what people ask for; but it is the other per cent that we have to look out for. In the paper I have prepared I have notice of some few instances which will be of interest, and which I think will beat the device described by Mr. Weld for giving short weight.

I might say in regard to the cards of which I have spoken, that we have at the office at all times a complete record, we think, of the business done by each inspector, showing back now seven years, the inspections in each place and the conditions as found, which is very convenient for reference. They are made up into bunches of 40 to 50, or what would be a day's work. At each place of business inspected the inspector leaves a receipt, so that there can be no question by the

proprietor of the place of business that he has paid his fee, or that we are there too early, or anything of that kind. Our inspections are semiannual, and in that way the dealer as well as our office knows when his inspections are due.

Mr. RICHARDSON. Before you take your seat, let me ask you, How do you test the correctness of spring scales?

Mr. HASKELL. By standard weights.

Mr. RICHARDSON. Do you hang them on?

Mr. HASKELL. Yes; we have a frame.

Mr. RICHARDSON. Suppose, for instance, you hang a pound weight onto the hook of a spring scale in order to force the scale down and it does not throw it down to a pound, you consider then it is not correct?

Mr. HASKELL. Yes.

Mr. RICHARDSON. If it draws it over a pound, you do not consider it correct?

Mr. HASKELL. No, sir; it must draw a pound. If over or under, it would not be correct.

Mr. RICHARDSON. I thought maybe if it went over you would let it go as correct.

Mr. HASKELL. No, sir. I want to say that we are as anxious and as careful in one case as in the other. We find many such cases where the merchant has scales which are giving more than the standard, and we take as much pains and are as careful to rectify that condition as we are the other.

Mr. RICHARDSON. I do not mean anything serious by that remark.

Mr. HASKELL. No; I know.

Mr. PETTIS. Mr. Chairman, I want to join with my friend, Mr. Haskell, the sealer of Washington. Our experience in Rhode Island tells us that the established merchant is the honest man every time.

Mr. HASKELL. I might say, Mr. Chairman, in line with a matter that you suggested or spoke of a short time ago, that we have the hearty cooperation of a great many of the dealers in Washington, and we also have the hearty cooperation of the Association of Retail Grocers through their officials, and in no case do they interfere when they find a violation of the law. I feel that they are as anxious to have that looked after as we could be ourselves.

Mr. PETTIS. Mr. Chairman, I have here a spring balance scale. We do not find them in stores; we find them among the itinerant peddlers or people of that sort. As I said before, the established merchant or man of business is the honest man.

Mr. REICHMANN. Mr. Chairman, Mr. Haskell certainly misunderstood me, because I certainly believe that most people are honest; but I do believe that there are a lot of dishonest people, even in the smallest towns. It is my firm opinion that the lack of laws and regulations puts a premium upon short weighing, and I personally believe that carelessness is as much dishonesty as anything else. I think Mr. Haskell would find, as well as Mr. Pettis or anyone else, that if the inspections of weights and measures in each town were discontinued three years, when he came back he would find an enormous percentage of weights that were incorrect.

Mr. PETTIS. I agree with you fully.

Mr. REICHMANN. The established merchants who buy their goods and sell them at a reasonable living profit are giving honest weight and measure; but they are not the ones to whom the poorer classes are going, and they are not the ones who are advertising in large red letters and posters the bargain sales on every Saturday, or whatever day they have.

Furthermore, I do not, most emphatically, agree with Mr. Haskell that the dealer, especially that class of dealers, should know when the inspector is coming to his place to inspect weights and measures, because if he is dishonest that simply gives him a clue that on that day he must fix up his scales for inspection. I think Mr. Palmer will bear me out that that rule is not followed in the State of Massachusetts.

In regard to dishonesty, when Mr. Derry (sealer of New York City) went into office about two years ago, in January, there had been practically no inspection, and it was necessary to confiscate or condemn thousands and thousands of balances and weights and measures. I am glad to say, however, that he reports in the next year's inspection there was a lesser percentage found. I think that sort of thing has been the experience of every State or county where inspection has been tried. Particularly was it so in Canada, where the inspection was first started. I do not have the figures exactly right, but something like 8 per cent of the weights had to be condemned. After that it dropped to a constant showing of 1 or 2 per cent, indicating either carelessness or dishonesty. A large per cent is carelessness, I grant you, but I think that is the very thing we should watch. The junk dealer who goes from one place to another, the huckster who has spring scales and sliding balance, the ragman, and others similarly engaged, particularly need watching. The poor people are the ones who are patrons of that class of dealers and need protection. As I have said, this is not a scientific question; it

is simply an economic or sociological one. It is the duty of the sealer of weights and measures to protect the people who can least protect themselves. The man who is buying his coal by the ton or carload is not going to get cheated, because he is buying from a dealer who is responsible. But I know a thousand people who are being cheated, and with no inspection it puts a premium on dishonest practices. Here is a man, for instance, with a little store who wants to increase his business. The next man to him in the block is slightly dishonest, and says to this man, "It is a sort of general custom in trade to give 14 ounces for the pound." He begins to give 14 ounces. If he can give 14 he can give $13\frac{1}{2}$ ounces, and if he can give $13\frac{1}{2}$ he can give 12 ounces; and by the time one would get down to the end of the block he would be getting practically nothing. Those are actual facts. It is not because I believe a majority of the people are dishonest at all, but I believe the majority of the people are trying to get all the dollars and cents they can. Their conscience is rather flexible, and if they see everyone around them doing certain things they think it legitimate. It is largely a question of carelessness and ignorance, but carelessness of that sort, in my mind, is dishonesty.

Mr. PERTIS. The remark I made was to advise the gentlemen from the Western States and other States where they have no system of weights and measures how things are going in the city of Washington, and in the cities in Massachusetts and in Rhode Island, where we have inspection every year. We do not find anything wrong among our regular dealers, except some little thing occasionally; but we do find things wrong among the itinerant peddlers.

Now, to show you gentlemen the necessity for your States adopting this system of examining scales and measures, I will give you a brief illustration. I was appointed state sealer in 1890. My predecessors had been old gentlemen who paid little attention to these matters. I went into office on March 10. On July 4 I had collected 1,200 wooden measures. In Rhode Island, when we find anything wrong with a measures, we take it and break it up. From that time until the end of the year I got 600 more, making 1,800 the first year. The next year I found less than 100.

Mr. REICHMANN. I want to say in conclusion that if any gentleman here is not acquainted with the detail work of a city sealer I know no place in the United States where he can get better information than right in Mr. Haskell's office, and without his permission I have repeatedly told persons coming to Washington, interested in

weights and measures, to be sure and call on Mr. Haskell, who could give them plenty of practical information.

The CHAIRMAN. I do not think the point has been brought out quite clearly, that a system of frequent and sufficient inspection is the keynote of the whole weights and measures proposition. While I agree that we have honest merchants in the State of Massachusetts, I feel that frequent inspection should be paid to the merchants' scales as to anyone's else, and at such time as they know absolutely nothing about our coming around. The honest man does not fear inspection; he rather welcomes it. It protects him against dishonest competition. We have rather peculiar conditions in Massachusetts. We have what is called syndicate or chain stores. These stores are operated by managers. They are controlled by a corporation or by one individual. One man in Boston controls over 160 stores at the present time, in and around greater Boston, extending as far west as Springfield, a distance of 100 miles from Boston. This man buys in carload lots, sometimes in whole train loads. He operates these stores from the city of Boston and has managers who have charge of the different stores. These men are charged with so much goods, and the man who makes the largest showing of profits, with a certain percentage for depreciation, is the man who gets the best job, and they change frequently. In some cases these managers change in from one to two months. The longest time I found one manager in control of a store was six or seven months. So you see how frequently they change. In 7 instances out of 15 inspections in these stores where a computing scale was being used, I found a 10-pound size paper bag folded and tucked underneath the pan. In the seven different instances in those stores apparently the manager was honest, to all intents and purposes, but the inspections showed that the practice was dishonest.

In the city of Holyoke we have a particularly efficient man as sealer of weights and measures. It is one of the first places in the State where we attempted to enforce some kind of strict regulations in regard to pound prints of butter. Under the old law, as I have stated, it was a rather roundabout way to bring prosecutions. He made something like 18 or 19 inspections and found 14 or 15 instances where pound prints of butter were short. He came to me and asked what he could do under the law. I told him what he could do, and made the suggestion that he give the matter to the local papers, not mentioning any names, but telling the amount of the shortage. He did this. And next day almost everybody in town when buying

butter asked the grocer, "This is not one of those short-weight prints of butter of which we have read in the paper?" In a short time the sealer had all the grocers in town at his office asking what they were going to do. These prints came from the creamery and were sold just as they were received. He told them they could sell what they had on hand without prosecution, but thereafter they must notify the creamery to give them correct weight. I will tell you of another case in Holyoke in regard to ice-cream boxes. The sealer made inspections and found the ice-cream boxes short; and in going around he was incidentally shown a letter which a dealer submitted from a box concern in another State, which stated that they were allowed a certain tolerance on boxes and that they made their boxes to come within this tolerance—that is, for the dealer to give the smallest amount possible—and the District of Columbia was quoted as being the authority for giving the tolerance. The local sealer asked me if there was any national law. I told him I knew of no national law. I got in communication with Mr. Haskell and found they did make a tolerance, I do not remember how much, but I told him that so far as we were concerned in Massachusetts the boxes must hold 32 ounces. The local sealer notified the dealers not to place their order with this concern. The dealers had an agent come to see the local sealer, and they came over and were going to put him out of the office, because in the next town there was no such rigid inspection; it was not required that these boxes should be of a certain size. But the sealer adhered to his position that boxes would have to contain 32 ounces. Boxes were submitted which would hold 32 ounces, and the dealers began ordering boxes. In almost every instance they were found to be all right. About two weeks ago the sealer called on a man who bought one gross of boxes from this same concern, on the statement that they were made in accordance with the new requirements, and were marked 32 ounces. He was curious, and upon examination found that they held only 30 ounces. This is an instance where the manufacturer of the boxes knew the provisions of the law; knew the position of the sealer who had stated that he could not sell anything but boxes of proper size in that town, and the dealer naturally supposed he was getting such boxes, whereas they were 2 ounces short. So, as I have said, a system of frequent inspection is the keynote of the whole proposition of inspection of weights and measures.

Mr. PETTIS. I move we adjourn until this afternoon.

The motion was carried, and accordingly at 1.30 o'clock the convention took a recess for luncheon.

SECOND SESSION (AFTERNOON OF THURSDAY, MAY 16, 1907).

The CHAIRMAN. Gentlemen, we will now come to order. Mr. Richardson, of Virginia, has to leave early, and if there is no objection, I will call on him to speak next.

Mr. RICHARDSON. You need not expect very much of a talk from me, notwithstanding the voluminous lot of things I have here in this book. I am not going to put all of them off on you this evening.

As an introductory to my remarks, I wish to state that I am glad to see such an increase in the number of delegates present over our two previous meetings, and I think this is an indication that the good seed has been sown and that it will soon result in a full ear. I congratulate the Northern and Eastern States on the interest they have taken in this matter, and I very much regret that my section of the country is so sparsely represented here, being represented by Mr. Matthews, from West Virginia; Mr. Cook, from Georgia; Mr. Woolf, from Maryland; and myself, from Virginia—four of us in all. But the South will wake up some of these days when she finds out she is receiving too little weight.

Since our last meeting I have written to all the judges of the courts, county and municipal, in our State. We have 100 counties and 18 cities. I have had replies from 82 counties and cities, and 36 have not been heard from. Sixty-five counties have no sealers and 17 cities and counties have sealers. In quite a number of replies received from judges of these different counties they said they had not appointed any sealer for their county and deemed one unnecessary. The people are so honest it is unnecessary to watch them with a county sealer! Now, whether that is true or not I do not know. It may be; I hope it is true. Our capital city, Richmond, I find on investigation has no sealer of weights and measures. I called the attention of the city authorities to the fact, and they went to work, and, through their judge, had a sealer appointed, who is a very active man and has been looking into matters. After he was appointed he had me examine his outfit, which had been previously furnished to the city by the State through my office, and he has been since that time making examinations, especially of dry measures, as that kind is used mostly by the

hucksters in the city in measuring potatoes, apples, etc., and he finds in making these investigations that their measures are not made according to the specifications. Whether that is the fault of the dealer or the manufacturer of these measures I am unable to say. According to the specifications a bushel measure must be $18\frac{1}{2}$ inches in diameter and 8 inches deep. A half bushel must be 14 inches in diameter and 7 inches deep, and a peck $11\frac{1}{4}$ inches by $5\frac{1}{2}$ inches. He found on investigation that some of the hucksters were using a bushel measure that was, say, 16 inches in diameter but the height more than 8 inches. On measuring a bushel of apples in that elongated measure the inspector could not get as many apples in it as he could in a vessel containing the same number of cubic inches but built on the schedule plan. The inspector said he did not know whether the merchants did not know any better, or whether the manufacturers of these measures did not know better. Anyhow, he notified the merchants that they would have to have their measures conform to the standards, and if they did not do so the measures would be confiscated. So that is the situation in Richmond. The other counties and cities reported as having sealers say that they are doing very little, or have very little to do.

Now, there has been a great deal said here about dishonest dealers, etc., some of our members taking the position that there are dishonest ones, or carelessly dishonest ones, and others taking the position that there are not, but I am led to believe from the remarks of our venerable member from Rhode Island that his State was in pretty bad shape when he took charge of the position of sealer of weights and measures, from the number of imperfect measures he reported as having destroyed soon after he took charge. I am glad to see from his reports that he has matters all right up there now. It is very natural for some people to get all they can, and for others to "can" all they get, so you will have to watch over that business a little.

I think it has been clearly and more forcibly demonstrated at this meeting than at any previous one of this association that there is some necessity for a general law on this subject. States that have laws are not complying with them in a great many respects, although they have the necessary outfit of standards. Other States having an outfit make no effort at all in that direction, and while I am a States' rights man I would be willing to suggest, or have the executive committee suggest, to Congress to pass a law forcing every State to adopt a uniform standard, and let it be under the control of the United States Government. Then we will have straight laws.

I am sorry that I have not been able to learn what our executive committee is going to report regarding a model law, and as I will have to leave you this evening I can not get a copy of the law unless I get it in printed form.

Mr. FISCHER. It will undoubtedly be printed.

Mr. RICHARDSON. I want to have it printed in my paper at Richmond, giving a synopsis of what occurred at the meeting, what States were represented, etc.

I am certainly glad to meet my old friends of the association here again, and also glad to make the new acquaintances. If these resolutions, Mr. Chairman, which the executive committee is going to suggest are what these different delegates think they ought to be, and you have them sent to the different States, I think that it will be a stimulus to the other States to go to work, as well as to those represented at this conference.

Mr. FISCHER. I do not see why we should not make such recommendations as the conference thinks proper, and that of course is what I had in mind, and I think that is what the executive committee had in mind in preparing it.

Mr. RICHARDSON. I think the sooner this matter is completed the better it will be. There is no question but there is a need of some general law on this subject and some system in every State. If it is left to the States themselves, there are very few of them going to attend to it properly. They appoint incompetent men as sealers because it is considered an office of minor importance, at least in my State.

Mr. PETTIS. I want to urge upon you gentlemen to get to work on this measure when you go home and do what you can to have state sealers of weights and measures appointed.

Mr. RICHARDSON. I think our executive committee will attend to that particular thing. That is one of the prime things that should be suggested in that recommendation, especially, that there shall be a state sealer. I do not know whether it is within the province of Congress to suggest the salary for a state sealer. If the office is to become a United States office, it would be in its province to do so. That is what I am in favor of doing and I don't believe it will amount to anything unless that is done. I was going to state a moment ago that nearly every man here representing a State and engaged in the business of sealing of weights and measures, has some other office on his shoulders. I am in the same position. I am register of the Virginia land office, which is one of the most important

offices in the State to the people in the State and very important to the people in West Virginia. I am not only register of the land office, but I am superintendent of grounds and buildings. Then I come in as superintendent of weights and measures, and my next job is that of superintendent of the capitol police.

Well, gentlemen, I certainly feel more encouraged at this meeting than at any other I have attended, and I hope by the time we get back here again Congress will have passed the bill as framed by your executive committee, and we will be in a position to go right ahead to have a state sealer of weights and measures appointed, and let all the States be furnished with an up-to-date set of testing instruments; then we can go ahead.

I will not take up any more of your time. I have with me an abstract of the laws governing the sealing of weights and measures in my State, which I will be glad to give to as many of you as I have copies with me if you desire to have them. I do not think they will have any effect on you particularly, except they may give you an idea as to how inspection is done, or at least supposed to be done, in the State of Virginia.

The CHAIRMAN. We will now hear from Mr. J. Sutton Wall, of the department of internal affairs of Pennsylvania.

Mr. WALL. I have the honor to represent the Keystone State—Pennsylvania—in this meeting, and in anticipation of addressing you, I have prepared a paper which I will read.

History and archæology tell us that standards of weights and measures were used by the Egyptians and Romans long prior to the beginning of the Christian era, and similar devices have continued in use by other nations down to the present time to meet the demands of trade and the industrial arts. The necessity for the establishment of uniform standards of weights and measures attracted public attention in the early colonial days of Pennsylvania, as shown by the records of the colonial assembly of that period, and led to the adoption of English standards in the early history of the proprietary government of this State.

The first notice in the laws of Pennsylvania of an attempt to legally establish standards of weights and measures is found embraced in an act passed November 27, 1700, by the general assembly under William Penn, as proprietor and governor of the Province, entitled, "An act for regulating weights and measures," as follows:

Be it enacted, That in each county of this province and territories there shall be had and obtained, within two years after the making of this law, at the charge of each

county, to be paid out of the county levies, standards of brass, for weights and measures, according to the King's standards for the exchequer; which standards shall remain with such officer in the counties aforesaid, as shall be from time to time appointed by the Governor, with the advice of the Council: And every weight, according to its scantling, and every measure, as bushels, half-bushels, pecks, gallons, pottles, quarts and pints, shall be made just weights and measures, and marked by him that shall keep the standards. And that no person within this province and territories shall presume to buy or sell by any weights or measures, not sealed or marked in form aforesaid, and made just according to the standards aforesaid, by the officers in whose possession the standards remain, on penalty of forfeiting five shillings to the prosecutor, being convicted by one Justice of the Peace of the unjustness of his weights or measures. And that once a year at least, the said officer, with the Grand Jury, or the major part of them, and for want of the Grand Jury, with such as shall be allowed and appointed by the respective County Courts aforesaid for assistants, shall try the weights and measures in the counties aforesaid; and those weights and measures as are defective to be seized by the said officer and assistants: Which said officer, for his fees, for making each bushel, half-bushel and peck just measure, and marking the same that is large enough when brought to his hands, shall have ten-pence; and for every lesser measure, three-pence; for every yard, three-pence; for every hundred and half-hundred weight, being made just and marked, three-pence; for every lesser weight, one penny. And if the weights and measures be made just before they be brought to him, then to have but half the fees aforesaid for marking the same. And if the said officer shall refuse to do anything that is enjoined by this law, for the fees appointed, and be duly convicted thereof, (he) shall forfeit five pounds, to the use of the Proprietary and Governor.

II. *Provided always and it is hereby enacted*, That the brass half-bushel, now in the town of Philadelphia, and a bushel and peck proportionable, and all lesser measures and weights coming from England, being duly sealed in London, or other measures agreeable therewith shall be accounted and allowed to be good by the aforesaid officer, until the said standards shall be had and obtained.

III. *And be it further enacted*, That no person shall sell beer or ale by retail, but by beer measure, according to the standard of England.

This act was supplemented by another act passed on the 19th day of January, 1733-4, by which millers, bottlers, and bakers were required to bring their weights and measures, once in three years, to the standard kept in each county. This last act was repealed April 5, 1781. Several acts were passed for the inspection of domestic commodities, but nothing further appears on the statute books bearing strictly on the subject of weights and measures until the act of March 29, 1813, entitled "An act for regulating weights and measures," passed as a supplement to the act of 1700, and relating solely to the city and county of Philadelphia.

On March 10, 1818, an act was passed, entitled "An act establishing a standard weight for grain and foreign salt." On April 2, 1822, an act was passed, entitled "An act prescribing the duties of the sealer of dry measures of the city and county of Philadelphia." This act

required the sealer of dry measures to keep in his custody and possession all the standard dry measures of the city, by which all the dry measures of said city and county were to be regulated and adjusted, all of which it was his duty to seal with a brand of the arms of the Commonwealth of Pennsylvania, the initial letters of his name, and the date of the current year. It also stipulated a schedule of fees to be charged by the sealer, and specified penalties for noncompliance with the law by the makers, venders, and proprietors of dry measures in said city and county.

The act of March 29, 1813, and the last-named act were repealed February 17, 1827. April 5, 1830, an act was passed repealing the act of 1827, and reviving the act of 1822.

April 15, 1834, a general act was passed, entitled "An act to fix the standards and denominations of measures and weights in the Commonwealth of Pennsylvania." This act specified that the standard unit of all measures of length shall be the "yard," to conform to that use in this Commonwealth at the date of the Declaration of Independence; that one-third of said yard shall be 1 foot; that one-twelfth of said foot shall be 1 inch; that the standard liquid measure shall be the gallon, to contain 231 cubic inches of the standard aforesaid; that the standard dry measure shall be the bushel, to contain 2,150.42 cubic inches of the said standard; that the standard of weight shall be a pound, to be computed upon the Troy pound of the mint of the United States referred to in the act of Congress of May 19, 1828; and the avoirdupois pound shall be greater than the Troy pound aforesaid in the proportion of 7,000 to 5,760. The fourth section of this act required the governor to procure within three years from the date of the passage of the act a standard yard, to constitute the positive standard of length in this Commonwealth, said standard to be equal in length, at the temperature of melting ice, to the distance between the eleventh and forth-seventh inches on a certain brass scale of 82 inches in length, procured for the survey of the coast of the United States, and now deposited in the War Department; the material of said standard to be brass, and the divisions upon it to be inches and parts of an inch. It also required the governor to procure for the use of the Commonwealth a standard gallon and bushel made of cast brass, a duly authenticated copy of the Troy pound of the mint of the United States, made of the same material, and to have such standards of measures, length, capacity, and weight inclosed in suitable cases and deposited in the office of the secretary of the Commonwealth, to be by him there

carefully preserved. Section 9 of this act also required the governor to provide within three years after its passage, for each of the counties of the Commonwealth, at their expense, positive standards of measures of length, capacity, and weight of the several denominations in common use, duly stamped, to be delivered to the county commissioners for use as standards for the adjusting of weights and measures.

This act required the length of the standard yard to be compared with that of the pendulum vibrating seconds, at a certain and defined spot in Independence Square, in the city of Philadelphia, at an ascertained and convenient temperature and pressure, and the standard of weight to be compared with that of 100 standard cubic inches of water at its maximum density, and at a convenient atmospheric pressure.

April 14, 1835, an act was passed, stipulating that the expense of procuring standard weights and measures as required by the last-named act (act of April 15, 1834), be paid out of any unappropriated moneys in the state treasury, upon the accounts being settled by the proper officers, in the usual manner, which the act of 1834 failed to provide.

April 14, 1838, an act was passed authorizing the governor to have prepared standards of weight, measure, and capacity specified in the act of 1834, and to carry into effect the provisions of that act as soon as possible.

April 15, 1845, a general act was passed, entitled "An act authorizing the secretary of the Commonwealth to distribute copies of the standard of weights and measures, and for the appointment of sealers." This act reaffirmed the main provisions of the act of 1834, with the addition of giving the governor authority to appoint one sealer of weights and measures for the city, one for the county of Philadelphia, and one each for such other of the counties of the Commonwealth as should apply for and obtain copies of the standards, as provided for in the second section of the act, said sealers to hold office for three years. A schedule of fees to be charged by the regulators is given in the sixth section of the act, and penalties for neglect or refusal to comply with the requisitions of the regulators under authority of the act are therein stipulated.

By the act of April 26, 1850, the county commissioners of the several counties of Pennsylvania are authorized to cause to be marked and established at or near their county seats of justice a true meridian line and a fixed standard measure of 2 or 4 pole chains, agreea-

bly with the measure of the standard yard then in the office of the secretary of the Commonwealth, at the cost of the respective counties. This act is still in force and has been complied with in some degree.

The intimate relation between the subject of standards of weights and measures and their inspection has led me to consider them under the same head. From the formation of the Colonial Government under William Penn to the convening of the Constitutional Convention in 1872, there seems to have been no doubt as to the right of the legislature to enact laws on the subject of inspection, and of the governor to act under authority of such laws so enacted.

In the debates connected with the formation of the various articles of the constitution of Pennsylvania in 1872-73, a pronounced opposition to any provision for the creation of a state office or offices for the inspection or measuring of merchandise, was developed. The persistence of this opposition led to the adoption of section 27 of article 3 of the constitution then framed, and which is still in force. This section reads:

That no state office shall be continued or created for the inspection or measuring of any merchandise, manufacture or commodity, but any county or municipality may appoint such officers when authorized by law.

This was followed by the act of assembly of April 4, 1877, which gave the governor power to appoint one person as sealer of weights and measures in each of the several counties of the Commonwealth, where no such office then existed by law, whose term of office should be for three years and be subject to the laws then in force governing such offices in the Commonwealth.

This was followed by the act of March 8, 1883, which stipulated:

That all laws and supplements thereto, providing for the appointment of sealers of weights and measures in this Commonwealth be and they hereby are repealed.

This act would seem at first glance to take from the governor the right to appoint any class of inspectors pertaining to weights and measures, but it was followed by the act of June 26, 1895, which appears to have been an attempt to restore again that power to him in cities of the first and second class, meaning at present the cities of Philadelphia, Pittsburg, Allegheny, and Scranton.

This in turn was followed by the act of April 11, 1903, appropriating the sum of \$2,500 to carry into effect the former act of June 26, 1895, in the matter of furnishing the several inspectors appointed by the governor in the four above-named cities, with standard weights, measures, and tests, as required by the second section of that act. The duty of furnishing these standards to the

inspectors was, by the second section of said last-named act, imposed on the secretary of internal affairs.

February 26, 1904, Governor Pennypacker informed Hon. Isaac B. Brown, then secretary of internal affairs, that he had, under the provisions of the act of 1895, appointed four persons as inspectors of scales, weights, and measures for the city of Pittsburg, two for the city of Allegheny, and two for the city of Scranton, Pa. It will be observed that this did not include any appointments from the city of Philadelphia, for which city no one had yet been announced.

Secretary Brown then set about to learn the probable cost of the equipments, which resulted in finding that the appropriation was much too small to purchase what would be required under the act for the four cities named. He then declined to take any further action in the matter, on the grounds that the act was in violation of sections 3 and 7 of Article III of the state constitution, and that the appropriation was totally inadequate to purchase the required equipments. Mandamus proceedings were then instituted against Secretary Brown before the Dauphin County court, wherein he was sustained in his refusal to comply with the act on constitutional grounds by that court. The case was appealed to the state supreme court by the attorney-general, and subsequently withdrawn before it was reached on the calendar. Another reason assigned by Secretary Brown for refusal was that under other existing laws of Pennsylvania equipments for the use of sealers of weights and measures must be tested by the United States standards furnished and kept in the office of the secretary of the Commonwealth, and that such standards were not then complete and in condition to be used by reason of the destruction of the state capitol building by fire February 2, 1897.

A bill is now pending in our state legislature entitled "An act to provide for the creation by ordinance in cities and boroughs of the office of inspector of measures and weights, scales, etc., for the appointment of such inspectors and deputy inspectors, for their compensation, and for furnishing to them standards by the secretary of internal affairs at cost, to prescribe fees and charge for inspectors' services, to prescribe their powers and duties, to prescribe the duties of dealers in merchandise with reference to weights and measures, and penalties for the violation thereof, and punishments for fraudulent dealing therewith."

This bill seems to be an attempt to secure the legal enforcement of uniform standards by inspection in the municipalities of the State where business interests and active trade relations are mostly centered, and to avoid the prohibitive features of the constitution.

The first section of this act gives the councils of cities and boroughs the power to create by ordinance offices of inspectors of measures and weights, to fix the term of office, number of deputies, bonds to be given by the deputies, and compensation either in the form of fees or salaries.

The second section provides that the inspectors shall be appointed by the mayors and burgesses with the consent of councils.

The third section provides that each inspector shall be furnished with a set of standard weights, measures, and tests by the secretary of internal affairs, at a reasonable price, as near as may be to the cost thereof, to be paid by the respective city or borough, and each inspector and deputy shall deliver the set of standards held by him to his successor in office under penalty to be fixed by said councils.

The fourth section prescribes the duties of the inspectors.

The fifth and sixth sections prescribe the powers of the inspectors.

The eighth section relates to the inspection of the weights and measures.

The ninth section requires the inspectors and deputies to keep a record of their inspections and report at least once a month to the comptroller or auditor of the municipality the number of measures, scales, etc., sealed, stamped, or marked by him, with the names of the parties for whom the service was rendered.

Sections 10, 11, and 12 relate to fines and penalties.

It is well to observe that while there appears to be no constitutional or statutory inhibition against the adoption or use of standards of weights, measure, and capacity in Pennsylvania, the power of inspection and enforcement seems to be obscure and somewhat questionable under the peculiar provisions of the state constitution. The Constitution of the United States clearly gives Congress the right to fix the standard of weights and measures, also to regulate commerce among the States. Now, since a uniformity of standards among the several States is certainly important to the convenience of interstate trade in such commodities as are required to be sold by weight and measure, it would seem reasonable that Congress ought also to have the right and power to enforce the observance and use of those standards it has the right to fix, either through powers delegated to the Interstate Commerce Commission or some other branch of our National Government, where such powers can not be legally exercised in the States.

The bill above referred to has failed to pass in the last moments of the session of the legislature for want of the necessary time.

Now, we have had no laws since 1883 to enforce the adoption or the use of any standard.

The CHAIRMAN. You state that was before your present legislature's action was taken?

Mr. WALL. It failed to pass for want of time.

The CHAIRMAN. Had it been considered by a committee and reported upon?

Mr. WALL. It passed the senate and had passed a second reading in the house, and was up to the third reading in the house yesterday. The session closes to-day at 12 o'clock, and they had to cut the calendar.

The CHAIRMAN. By whose authority was that bill introduced? Do you know?

Mr. WALL. I think it was introduced in the senate; I can not tell you now by whom.

The CHAIRMAN. It doesn't make any difference. Did the Bureau of Standards have anything to do with it?

Mr. FISCHER. Only so far as we have communicated with Mr. Brown. We have been communicating with him right along.

Mr. WALL. I had a packet of bills to bring over with me, but it was left in my office through oversight.

The CHAIRMAN. I was just wondering whether it would comply with the recommendations of the Bureau. That is all I had in mind. It just simply emphasizes the necessity of uniform legislation. The States are apt to adopt something they compile themselves.

Mr. WALL. I think there ought to be a general law; I think the laws of the United States on this subject ought to be uniform. We have not the power to adopt any such laws under the constitution. We can not pass a law unless we take advantage of that provision which gives the municipal authorities the right. We can not even require the municipalities to do it. We can pave the way and make it so they can do it in a legal form, but we can not make it compulsory—so declared by the attorney-general of our State. I am satisfied that there is a great necessity for uniform legislation in the State of Pennsylvania on account of manufacturing interests; I can see it very plainly. While I am not in close contact with business interests at present, with States in such shape as ours, I do not know what we can do at the present time unless the matter is taken up by the National Government. However, we might do something in aid of executing it.

The CHAIRMAN. Do I understand that the office you represent at the present time has anything to do with the supervision of weights and measures at all so far as the care and custody of the standards go?

Mr. WALL. In 1850 Pennsylvania was furnished with a set of standards by the United States Government. They were used until 1897, when our capitol was burned. Then they undertook to saddle the business, the duty of furnishing scales, weights, and measures, on the department of internal affairs. The secretary of state is charged with the care of the standards.

The CHAIRMAN. He still has the care and custody of those instruments at the present time?

Mr. WALL. Part of them were destroyed by the fire, and the secretary of state has the other part that is in use. Secretary Brown, I think, communicated with the Department of Commerce and Labor here on the subject, and we learned that since one set had been furnished we could not get another set without paying for them, and were advised they would cost about \$500.

The CHAIRMAN. The next on the list is Mr. B. F. Thomas, of Ohio, with whom quite a number of us are acquainted. We are glad to see him again.

Mr. THOMAS. Mr. Chairman, there is very little to report since last year from the State of Ohio. As those of you who were here last year probably remember, the professor of physics in the State University is ex officio state sealer, made so because the former state sealer and secretary of state had, whenever questions arose in connection with weights and measures, called in the professor of physics in the university to advise and to carry out the duties of his office. Mainly, however, the transfer from the secretary of state to the professor of physics was made because the standards which had been furnished by the Government under the joint resolution of 1836 were not properly cared for in the office of the secretary of state, and at the time the transfer of authority was made it was proposed for lack of room in the office of the secretary of state to remove the standards into the basement of the capitol building, where, of course, conditions would have been much worse. That is the reason why the professor of physics is ex officio state sealer.

The duties of the state sealer as prescribed by the State of Ohio are very simple. He is to have custody of the standards furnished by the General Government, and is to furnish the county auditors as ex officio county sealers with copies of the standards furnished by

the General Government. That is the extent of his duties so far as the standards of weight, measure, and capacity are concerned. He is also charged with the duty of testing and certifying meter provers which the gas companies of the State are required to keep for the verification of meters, which they are required to have tested by the state sealer. That comprises the full line of duties of the state sealer in Ohio. He has no power of any sort with regard to the requiring of reinspection of county auditors' standards, nor is he empowered to do anything whatever toward the enforcement of the laws of the State concerning the use of weights and measures. He is allowed by law to furnish to municipalities, on payment of the cost of them, duplicate sets of the standards of weights and measures such as are furnished to county auditors.

With regard to the operation of the laws regarding weights and measures in the State, I can only say that the local sealers of weights and measures in a number of the cities of the State are exercising increased vigilance in the matter of enforcement of the laws. With the exception of some two or three particulars, however, the enforcement of the laws is left under the supervision of local ordinances.

I am quite anxious to see the conference come to some conclusion as to what action should be taken with regard to weights and measures. It seems to me we have had a good deal of relating of experiences, but we do not seem to have gotten to the point yet of recommending anything of uniform action by the States. I raised the question at the last meeting which I suppose we are to have answered this afternoon at the office of the Secretary of Commerce and Labor regarding the practicability, or the possibility, of a national law regarding the enforcement or observance of standard weights and measures. It seems to me that if the National Government has—and it has without doubt—the right to prescribe, and in a way control, local commerce—not to say interstate commerce—and the character of the equivalent which a man must give for goods which he purchases, it ought to have likewise the power to enforce the way in which a purchaser gets his goods for which he must pay a nationally recognized equivalent, not in case, but in value. The currency offered in buying a bushel of potatoes in your local market has to be currency of the kind recognized by the United States. If you offer a counterfeit 50-cent piece, you come under the operation of national laws right away, but if the dealer offers you a counterfeit half-bushel of potatoes he is not under that law. I do not think that is right. I raise the question whether it is in the

power of the National Government to provide for the enforcement in local commerce of the use of correct weights and measures. If it can not be done, the question is a more difficult one to deal with, because each one of us has a local legislature to deal with, and as Mr. Wall has just stated a local legislature is not always amenable to argument on the question of weights and measures. Some States may agree—I hope the majority of the States in the Union will agree—to adopt some uniform policy in regard to such matters. Whether we can get all the States to do it is the question in my mind. However, I am anxious to see some attempt made in that direction.

The CHAIRMAN. Mr. George H. Pettis, of Rhode Island, is next.

Mr. PETTIS. Mr. Chairman and gentlemen, Mr. Wall, of Pennsylvania, has given us the early history of weights and measures in Pennsylvania. Allow me to say that in 1641, five years after Roger Williams located at Providence, John Clark was empowered by the town council of Newport to proceed to Boston to get a set of weights and measures. Newport and Portsmouth were two towns consolidated at that time. The other two towns were Warwick and Providence. Afterwards they were consolidated, when the general assembly adopted laws in regard to weights and measures; and from that day to this we have been foremost in this regard of any State in the Union.

With reference to the matter of a state sealer and with a view to building up legislation in those States having no adequate laws on the subject of weights and measures, I wish to call your attention to the second paragraph on page 357 of the book before you (*Laws Concerning the Weights and Measures of the United States, 1904*), under the head of Rhode Island, which reads in part, as follows:

There shall be a state sealer of weights, measures, and balances, who shall be sworn to the faithful performance of his duty.

It then states what his duties are, when he shall be appointed, and that he has charge of all materials, etc.

The statute further provides (p. 368) that—

The state sealer of weights and measures, and the city and town sealers of weights and measures in the various cities and towns throughout the State, shall be, by virtue of their respective offices, special constables, and as such they shall have power to prosecute all persons violating the provisions of chapter 167 of the General Laws, and all acts in addition thereto or in amendment thereof, and shall not be required in such prosecutions to furnish any surety for costs. They shall also have power to arrest upon view without warrant, and to detain for a period of not more than twelve hours, any person found violating any of the provisions of said chapter 167 of the General Laws of Rhode Island, or of any acts in addition thereto or in amendment thereof.

If a sealer finds a peddler going around with a measure that has been taken apart and lapped over, he places him under arrest. The offender is prosecuted, and invariably (there has never been a failure to convict) he is fined \$20 and costs.

I have brought along two things to show you. Here is a spring-balance scale with a sliding face to it. We have taken up 140 of these in Rhode Island in the last three years, and each party was fined \$20 and costs. This particular scale has a little history, and I will relate it for your benefit.

As state sealer I go around to all the towns and go through half a dozen or more of the stores, picking them out as I go along, and I look over their scales and weights to see if the town sealer is attending to his duties. I was at Berwyn attending to my duties, and, walking down the main street, I saw a peddler. I said to the town sealer, "Let us go over there and see that peddler." The peddler went into a carpenter shop, and we went in there after him. I said, "Who owns this team out here?" One of the young fellows said he (the peddler) owns it. I said, "Let me see the scale." He handed me over a good scale. I said, "Let me see your other one." He said that he had no other, but I knew better. I knew that they carried them in their hip pockets. I reached over into his hip pocket, and as I got my hands on it he gave me a push. I closed in with him, and threw him on the floor, and landed on top. He got this scale out of his pocket and tried to throw it on the counter. I got the scale, however, and took him down to the station house. He was fined \$20 and costs.

Now, here is a matter in connection with milk bottles which I wish to mention, but I do not want to find any fault with Mr. Palmer or with the State of Massachusetts. In the city of Boston there are five men who mark bottles. They test the bottles, and if they find them correct an inspector puts a "B" like that on a bottle [indicating on blackboard], another puts a "B" like that on another bottle, and a third writes a "B" like that, etc. Now, in the State of Massachusetts I think there are something like 20 towns commencing with "B," so how are you going to tell where that seal was made? In Rhode Island we have a distinguishing stamp for each town. This is the way we stamp a bottle [exhibiting bottle]. I would like to have you look at it. We mark tin and copper measures with seal stamps like this [illustrating]. For instance, the town of Berwyn will be "B. S.," and then we stamp the date on. We have a large

seal with which to stamp dry measures. "P. S. 07" means Providence seal, 1907.

As to my duty as state sealer, I go once in three years to the 38 towns and examine the town standards. The General Government about 60 years ago furnished us with three magnificent big standard balances, with a set of avoirdupois weights, 50 pounds, gold-plated, each one of them under a glass case by itself. Each town buys a working set with which the inspector goes with a wagon from store to store. Inspectors are not allowed to take those state standards out of the office. I would not think of taking out of my office one of those weights or measures which have been furnished by the Government.

There are a number of gentlemen here this year who were not at the last meeting. Last December I sent a copy of my annual report, containing the laws in regard to weights and measures in Rhode Island, to those who attended last year's conference, and on my return home after this meeting I will be glad to send copies to all present who have not received one.

The CHAIRMAN. We will hear from Mr. Matthews, of West Virginia, next.

Mr. MATTHEWS. Mr. Chairman and gentlemen, I do not know that it is hardly becoming for me to undertake to make any remarks on this occasion. We have no such office as sealer of weights and measures in my State. I was requested by the governor to come here and attend this meeting in order to obtain some information, so that I might intelligently recommend to the legislature some acceptable measures to regulate weights and measures in West Virginia.

Of course, you all know that West Virginia is a mining State, and our principal industry is coal mining, and the people who own coal mines have it mined by the ton or bushel. West Virginia is comparatively a new State and the endeavor among its citizens is to keep pace with the best States of the Union, and I assure you that I have paid attention to the remarks made here by the representatives of the States, and tried to gather information which will help us in getting some laws passed.

It occurs to me that if we want to get a national law on the subject of weights and measures, that this body should prepare resolutions and officially recommend them to Congress. I think we can get some laws passed in West Virginia that would be beneficial. I am ready to help you in any way that I can. This is my first visit and I hope

you will pardon me if I have suggested too much, as a new member, but I want you to understand I am with you on anything for the betterment of conditions.

Mr. FISCHER. I think I can assure the delegates that the committee will have something definite to present to-morrow, but it seems to me that even if it had been ready to present to-day it would have been a great deal better for the new members to be somewhat educated to consider the various provisions of the law which will be presented. It is not a bad thing, after all, to have that come up to-morrow. I am quite sure that to-morrow the committee will be ready to present a draft of laws which will be partly national and partly to be adopted by the States.

I would also like to say that in addition to the States which have representatives here, a number of other States appointed delegates, namely, Wyoming, Kentucky, Nebraska, New Hampshire, North Dakota, Utah, and Wisconsin. These gentlemen did not come, and I think in almost every case it was because there were no funds from which their expenses could be paid and they did not seem to take enough interest in the matter to come at their own expense. In addition to that every one of the governors, with the exception of perhaps seven or eight, expressed a great deal of interest in the matter, and stated that they would bring the matter to the attention of the legislature, and in some cases it was brought to the attention of that body. In New Mexico a law was passed providing for county sealers, and enough money was appropriated to provide the State with a new set of weights and measures, and also all the counties with sets of weights and measures. The Bureau of Standards was asked to order the weights and measures, seal them, and send them down there, the expenses to be paid by the State. I think it can be said for all the States that they have interested themselves in this matter.

The CHAIRMAN. We should adjourn in a few minutes in order to keep our appointment with the Secretary at the Department.

Mr. REICHMANN. I move that we now adjourn and proceed in a body to the Secretary's office, and that we meet to-morrow morning at 9.30 o'clock promptly.

The motion was carried, and accordingly at 3.15 p. m. the conference adjourned and proceeded to the office of the Secretary of Commerce and Labor.

RECEPTION AT THE SECRETARY'S OFFICE.

Arriving at the Department, the delegates were introduced by Mr. Fischer to Secretary Straus.

Secretary STRAUS. Gentlemen, I am very glad to welcome you here. I feel that you have come here for a very useful and very important purpose, and I wish to assure you that this Department is anxious and desirous and willing to cooperate with you in every way possible in carrying out the purposes for which you came and the duties that devolve upon you in your respective States.

In the early history of our country we had to do the most needful things. We are now doing additional things that are practically valuable in a scientific way; and in this Department especially, which I preside over, when we bring together the heads of our bureaus, as we have recently formed the practice, 12 or 15 different chiefs, it is like bringing together the faculty of a great university. It is a pleasure that we have at the head of the various bureaus real experts in their various lines. I must say that politics has played very little or no part in the constitution of this Department; we know very little about politics here, but we know considerable about business, and are trying to run the Department on those lines.

It is a very strange fact, which doubtless has occurred to each one of you, that whereas this Government has from the very beginning, by the very necessity of things, carried out that provision of the Constitution that provided for money, the National Government has never taken up the accompanying subject of standards of weights and measures. Of course, it is not quite so pressing as the question of money, but it is of very great importance.

We must dignify commerce in every way possible, and I think the most important way to do that is to make its standards absolutely reliable. Those of you who are acquainted with the development of business in the last twenty-five or thirty years, especially in our larger cities, know we have come practically to the one price. A child can go into the large magazines of our big cities and buy with as much confidence as an expert can. They have one price and that ends it. That was an enormous elevation of the dignity of commerce. Now we want to make the question of standards such, too, that nobody can be deceived. We want to make them just as reliable as money. It is of the very highest importance. I feel a special interest in it because I believe that the people who suffer most from

dishonest measures and dishonest standards are the poorer people of the country; those who live on wages are the ones that are made to suffer. The rich do not suffer. The man who goes into the big stores and buys in large quantities has his various products weighed and measured. Take great hotels, or any large concern which buys supplies—they check off everything; they never suffer. But it is the ignorant and the poor, and the more ignorant and poorer they are the more are they cheated and deceived by false weights and measures.

I feel that I am talking to men who know more about this subject than I do, but I wish to say this to you—you may not agree with me, and I therefore throw it out in a suggestive way—but I am firmly convinced that what the Constitution intended and clearly provided for, the fixing of weights and measures by national legislation, was wise. I see no reason why this subject should not be one that should be treated nationally. It is better all around. We have 45 different Commonwealths in this country, and just as we have one money, that passes from one end to the other of these Commonwealths so that you do not need even to look at it, so we should have one standard of weights and measures which will be exactly the same in Alaska as in Florida, and the only way to acquire absolute uniformity is through national legislation.

Now, some time ago the subject was referred here from the Bureau of Standards as to whether this is a subject of national legislation. It was submitted to the Solicitor of this Department, with whom I had been consulting, for the purpose of this very meeting, and I have before me the opinion of the Solicitor, from which I will read you a few extracts (of course you are familiar with the constitutional provision, which is contained in section 8 of Article I, which reads, "The Congress shall have power to coin money, regulate the value thereof, and of foreign coin, and to fix the standard of weights and measures"):

The power to fix the standard of weights and measures having been granted to Congress without limitation and a clause containing the grant having been transferred from the Articles of Federation, where it was exclusively contained, the view has been taken that it remains now as formerly, a power exclusively vested in Congress, and it is regarded as doubtful whether the enactment of any State on the subject is of any validity whatever, even though Congress has wholly neglected to attend to this regulation.

I think I can state without any doubt that that conclusion to which the Solicitor refers is not correct; I mean that presumption, as he shows, is not correct. The States have absolute power to regulate this so long as the National Government has not taken it up, but

when the National Government does take the matter up then it supersedes all state regulations. I think there is no doubt about that legal conclusion as to the interpretation of that clause of the Constitution to which I have just referred. Therefore it all depends upon you gentlemen, and those other States that are not represented here, as to whether you feel the need for the motif of this clause of the Constitution. If you do, then it is very easy to prepare a law that will make the standard of weights and measures and the standards throughout the country uniform, and also provide for their regulation and inspection. The law is no good unless carefully enforced. Of course, the National Government can enforce it, and if it passed and came under this Department, as it likely would, I can assure you I will do everything in my power to see that it is very carefully enforced. If you agree with me in the conclusion that I have intimated as to the desirability of a national law on this subject, I hope that you will formulate something before you separate, and if you require any legal assistance in drafting such a measure as you would be willing to recommend to your separate States I will be glad to place at your disposal for consultation and for assistance the very able Solicitor of this Department.

I welcome you here and I am deeply interested in your work, and I shall do everything in my power to strengthen the Bureau of Standards so that it may render not only in this respect but in the many important respects in which its activities are enlisted for the benefit of the people in all the States. I thank you very much. [Applause.]

Mr. PETTIS. Does not the General Government to-day have the supervision of the weights and measures? Do not we have the same weights and measures throughout the whole of our grand country?

Secretary STRAUS. Not precisely; the standard varies. I think Mr. Fischer can give some light on that subject from a practical point of view.

Mr. FISCHER. Mr. Secretary, so far as weights and measures are concerned—the pounds and bushels—they are uniform, but so far as use of them is concerned, they are not uniform. For example, we have different laws regarding the capacity of a bushel for commodities in different States. There are a number of different gallons used in the United States; in that sense the standards are not the same.

Mr. PETTIS. I know that in New Mexico two measures are used for the measurement of grain, etc., that we do not have in any other part of the country. They are legal measures there.

Secretary STRAUS. Those are Spanish measures?

Mr. PETTIS. Yes, sir.

Mr. WELD. Mr. Secretary, I think the greatest difficulty we encounter is not lack of uniformity in the standards themselves. I think there is perfect agreement as to the value of the pound, for instance, throughout the whole country. But the difficulty is in the enforcement of any sort of inspection of our standards; and it seems to me (and I think I am right) that the principal thing we have to deal with is the securing of legislation which will secure, or guarantee, uniform inspection, uniform penalties, and so forth, in regard to this particular matter. In this I think I express the views of the delegates.

Mr. THOMAS. Mr. Secretary, I do not wish to propound conundrums exactly, but I wish to express a question which is in my own mind; not necessarily for answer now, but one to which I should like an answer in the course of time, and it is this: The section of the Constitution from which you have quoted, in connection with the opinion of your Solicitor, is perfectly clear in placing the question of weights and measures alongside that of the currency, as to the powers of the National Government; but the question in my mind is whether there has been at any time, by Congress or otherwise, or in connection with the powers and functions of the National Government, any delegation of that power as to weights and measures to the several States.

I know that in the State of Ohio, when the set of standards were submitted to it, under the joint resolution of Congress in 1836, that the copies were sent there with a recommendation to the governor and the legislature of Ohio that they should be adopted as the legal weights and measures for the State of Ohio. Now the question in my mind is whether that recommendation was made in consequence of some delegation of power to the States by the General Government, or whether it was simply an administrative question on the part of the Treasury Department, from whom the weights and measures came. In that case the question would arise as to the power of the National Government at this time to override that former action, and to take the whole question out of the hands of the States, and to administer it in its entirety as to the specification of weights and measures which may be lawfully used. And furthermore, as to the exercise of police power in the enforcement of these regulations, there is no question whatever. Practice shows us that the Government does exercise police power throughout all the States and Territories in connection with the currency question, and as the power to establish a currency and to establish weights and measures occurs side by side in the same sentence, it would seem to me that, in the absence of any

other action by the National Government delegating or limiting its powers in that respect, that section ought to carry with it also the power on the part of the National Government to exercise police power with regard to weights and measures. That is the whole question.

Secretary STRAUS. I think I can answer you.

Mr. THOMAS. If you will do so, I will be pleased.

Secretary STRAUS. I think I am correct in saying that if there was anything of that kind to which you refer, it must have been simply an administrative recommendation, as a guidance or an aid to the State.

Has the National Government a right? If it has a right, is it desirable? Now, that is for the States to decide, because the States have a full right to regulate it themselves—there is no doubt about that in the absence of national legislation under this clause of the Constitution. Of course, that raises another question, but I think there ought not to be any disposition, so far as the executive departments of this Government are concerned, to arrogate any additional power. They have power enough unless it is necessary in order to carry out a measure that such power should be assumed. Now, if every State would have a convention and would get together, they could regulate that among themselves fully. The difficulty about those things usually has been to get 45 different bodies together to agree upon something. That involves a great deal of practical difficulty unless the subject is extremely pressing. And all that the people are interested in, or all that those people are interested in for whom we are concerned, is that they do get honest weights and honest measures.

Now, the very fact that these regulations have not been made in every State, and in many States where made are not enforced, would seem to indicate that something better is needed. I suppose that better results could be obtained if we had important delegations from all the States together, and they would go home and make an appropriate canvass for their separate States, and if the laws are not correct have them amended so that they would be; and then after they are made see that they are enforced. I think you gentlemen are the best judges of whether anything should be done; and, if anything should be done, how it should be done. I am merely laying before you that it could be done nationally. I do not advocate it. I simply want to tell you what is the opinion of the Department upon the subject.

Mr. PETTIS. Mr. Secretary, I would like to state a case to you and to the gentlemen of the Bureau of Standards, showing necessity for proper action by the General Government in this matter of weights and measures. In the State of Massachusetts, in 1890-91, a law was passed in regard to the inspecting of milk jars and bottles. Milk is delivered throughout the country in half-pint, pint, quart, and 2-quart jars. It was found on inspection there that nearly one-half of them were short measure. Now, we of Rhode Island and Connecticut had no law. Consequently when the jars were condemned by the inspectors of Massachusetts on account of short measure, they were sent into Rhode Island and Connecticut. There were 100,000 short milk jars sent into the little State of Rhode Island. Last year our legislature passed a law, which went into effect on July 1, whereby we inspect milk jars, and we got rid of the short-measure jars. But Connecticut had no law, and the condemned jars were sent there. I have been told that a great many condemned jars have been sent into New York State.

Now there is a case where the General Government should take action, it seems to me.

Mr. RICHARDSON. I want to ask if I understand you right, Mr. Secretary. As I understand you, you say that no State can be forced without its own consent to adopt any United States standards which have been adopted by Congress. Is that right?

Secretary STRAUS. Well, what I meant to convey was this, that no State can be compelled to pass laws to regulate the standard of weights and measures unless it so chooses. It is a matter entirely within its own concern, unless the National Government takes up the question and passes a general law upon the subject. In other words, the Constitution vests the National Government with the power of making laws to regulate this subject; but in the absence of exercising that power through legislation, each State is free to do as it chooses.

Mr. RICHARDSON. That is what I understood you to say.

Mr. FISCHER. Mr. Secretary, I think we have taken up as much of your time as we ought to in this matter. I am sure that I voice the sentiment of all those present when I say that we are greatly indebted to you for your remarks, and also for the opinion of the Solicitor which you have obtained for us.

THIRD SESSION (MORNING OF FRIDAY, MAY 17, 1907).

The CHAIRMAN. Gentlemen, we will now come to order, and I will ask the Secretary to read Mr. Haskell's paper.

The Secretary read Mr. Haskell's paper, which is as follows:

The government of the District of Columbia is administered by a board of three Commissioners, having in general equal powers and duties. Two of them, who must be actual residents of the District for three years next before their appointment, and have during that period claimed residence nowhere else, are appointed from civil life by the President of the United States, and confirmed by the Senate, for a term of three years each. The other Commissioner is detailed from time to time by the President of the United States from the Engineer Corps of the United States Army. Although Congress has the exclusive legislative authority in the District of Columbia, it has empowered the Commissioners to make certain regulations of a municipal nature.

The Bureau of Standards has kindly provided each of us with a compilation of the laws concerning weights and measures of the various States, and as the laws of the District of Columbia relating to this matter were explained at a previous meeting of the state sealers I shall not refer to them in detail.

Nearly everyone knows the general purposes of the weights and measures law. The sealer is charged with the protection of the consumer against short weight and measure and the sharp dealing of dishonest merchants.

Occasionally startling cases of efforts to cheat by short weight or measure are uncovered by the inspectors in their rounds, and it may be of interest to cite a few of the many attempts to defraud which have come to our notice. I recall the case of a man who dealt in coal in a small way, who was found selling 1,000 pounds for a half ton. This man's plan was ingenious. He would go among his friends and solicit orders for coal, and then go to one of the big dumps to buy his supply. To the wholesaler he would declare that his wagon would hold only 1,000 pounds and thus get a short load, while to his customers he would deliver 1,000 pounds as a bona fide half ton. The legal

weight of a ton of coal in the District is 2,240 pounds. He was given the maximum sentence.

One of the prize schemes employed in defrauding the public was an electro-magnet, used by a junk dealer to pull down the scale beam to his own profit. The magnet was so strong that with it a large iron bar a yard long could be lifted from the floor. Another well-planned scheme to defraud was that of a driver for an oil company. Detectives were employed by the local manager of the company to apprehend the man, about whom many complaints of short measure had been made. An inspector from the sealer's office caught him. His scheme was to effect a short measure by placing two pieces of wood 2 by 4 by 12 inches, inside a standard and sealed 5-gallon can, one on each side, and braced in position by a piece of broom handle. In this way he would lessen the contents of the can to less than 4 gallons. The mechanism of the woodwork was such as to be easily removed when an inspector approached.

The inspectors often detect and arrest coal peddlers in the act of delivering 3 pecks of coal for a bushel. Such dealers generally operate in neighborhoods where the poorer people live. The court usually imposes a fine of \$75, with six months in jail as the alternative, in such cases.

We do not seal milk jars in the District of Columbia, but we have established, by taking a case into the courts, that they are measures and subject to inspection. We look after this inspection by visiting the dairies frequently and by inspecting jars from the delivery wagons on the street. When short-measure jars are found, prosecution follows. By this method we have succeeded in abolishing the use of short milk jars to a minimum, as the parties who might be disposed to use them know by experience that violations will be energetically prosecuted, and, not knowing when an inspector may drop in on them, either at their place of business or on the street, they are careful to see that the jars they use are correct. We probably cover in this way the inspection of 250,000 jars, which is a large per cent of the number used in the District. This method saves the office an endless amount of labor, and the result desired is obtained.

One of the most frequent causes for short weight during the past year seems to have been due to the use of a certain computing scale, which in the majority of instances is found starting on the 1 or 2 ounce mark. We would be glad of a means of abolishing its use in the District. The grocer is usually given the benefit of the doubt the

first time the indicator is found out of place, but the next time no leniency is shown him. The aggregate saved to the public annually by the activity of the sealer and his assistants may be illustrated by the following: It is estimated that we visit semiannually 5,000 places in the city of Washington where scales, weights, and measures are used. Perhaps one-half this number are using more than one scale, but, to be within the limit, let us confine the estimate on the basis of only one scale to each place of business, and see what the loss to the public would be without proper protection. Each of these scales will average 40 weighings per day. Five thousand scales, 1 ounce short each, used 40 times in 1 day would show a loss to the public of 200,000 ounces; 300 days would show a loss of 60,000,000 ounces, or 3,750,000 pounds. Taking tea, coffee, sugar, butter, rice, potatoes, flour, etc., it would be but fair to place an average price of 10 cents per pound on the commodities weighed thereon, which would mean a yearly loss of \$375,000.

Few people realize the amount in the aggregate which is saved by the vigilance of the officials whose duty it is to inspect weights and measures. There are few schemes worked upon the people where the loss is so extensive as through the system of weights and measures.

During the fiscal year ended June 30, 1906, 19,996 inspections of scales, weights, and measures were made, which does not include the milk-bottle inspections above referred to. Of this number, 439 inspections were made for the United States Government and 66 for the District of Columbia, for which no fees were collected. The sealer is not authorized to collect fees for the inspection of government scales, and the inspections are made as a matter of courtesy. This work was accomplished with a field force of two assistants.

One hundred and fourteen cases were presented for prosecution during the fiscal year 1906, and fines to the amount of \$730 were imposed. One offender was sentenced to serve eleven months and twenty-nine days and another five months for violation of the weights and measures law. Before presenting a case to the police court it is investigated very carefully, as we occasionally find instances where there is no intent to defraud, and prosecution would be persecution.

There is a determination on our part not to permit the use of anything in the line of scales, weights, or measures that would even suggest misrepresentation.

The force is kept busy every week day in the year in a systematic canvass of all manner of mercantile establishments and hucksters'

carts, ice wagons, and junk dealers' carts, and in examining ice-cream boxes, berry boxes, milk jars, etc. So many of these articles have been condemned that merchants now frequently do not order boxes or measures, nor the manufacturers make them for the Washington trade, until they have submitted samples to the office for approval as to capacity.

In addition to the inspection of weights and measures, the sealer of the District of Columbia has immediate supervision of the District markets and market masters, the public hay scales and weighmasters, inspectors of flour, lumber, wood, and the fish-wharf privileges.

In this city the sealer is fortunate in having the hearty cooperation of the honorable Board of Commissioners, together with that of a large number of the most reputable dealers and the officers of the Retail Grocers' Association.

Many difficulties are encountered in the administration of a weights and measures office, and what seems to be needed most is national legislation and a uniformity of laws relating to weights and measures in the several States.

In conclusion, I wish to thank Doctor Stratton and Mr. Fischer for the many courtesies which they have extended to me personally and to my office.

The CHAIRMAN. At the meeting last year the executive committee was directed to draw up a set of model national and state laws, to be submitted to this body for discussion. I will call on the secretary to present the report of the committee.

The SECRETARY. I would suggest that we read the whole report and then afterwards take it up section by section. The report is divided into two parts; the first has to do with proposed national legislation, and, second with matters intended for the consideration of the state legislatures.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Commerce and Labor is authorized to furnish a complete set of standard weights and measures adopted or accepted by the National Bureau of Standards to any State under the following conditions:

SECTION 1. That the office of state inspector be established.

SEC. 2. That facilities such as suitable quarters and equipment be provided for the state inspector at the expense of the State or Territory.

SEC. 3. That the state inspector be required to make an annual report to the governor, a copy of which shall be sent to the National Bureau of Standards, giving, among other information, the number of weights, measures, and balances tested, sealed, or condemned by him, together with an inventory of the standards and apparatus in his possession.

SEC. 4. No weighing or measuring device shall be used for the purpose of trade until the type has been approved by the National Bureau of Standards. Any type so approved may be used anywhere in the United States: *Provided*, That nothing in this act shall prevent the state or local inspector from condemning such device if its operation should be defective.

SEC. 5. Model regulations for the guidance of state and local inspectors shall be prepared by the Bureau of Standards in cooperation with the National Association of State Inspectors.

SEC. 6. The model regulations, prepared and issued by the National Bureau of Standards, shall govern the procedure to be followed by the state and local inspectors in inspecting, testing and sealing all weights, measures, balances, or measuring devices.

SEC. 7. The net quantity of the contents of all packages shall be plainly stated in terms of weight or measure on the outside of the package.

The CHAIRMAN. The sections which follow are intended for consideration by the state legislatures:

SEC. 8. The weights, measures, and balances received from the United States, under a resolution of Congress approved June fourteenth, eighteen hundred and thirty-six, and such new weights, measures, and balances as shall be received from the United States as standard weights, measures, and balances in addition thereto or in renewal thereof, shall be the authorized standards by which all county and municipal standards of weights and measures shall be tried, proved, and sealed.

SEC. 9. There shall be a state inspector of weights and measures at an annual salary of at least two thousand dollars, said inspector to be appointed by the governor with the advice and consent of the senate.

SEC. 10. The state inspector shall have the exclusive custody and control of the state standards received from the National Government, which shall be kept in a fire-proof room provided by the State when not in actual use. He shall maintain the state standards in good order, and submit them once in ten years to the National Bureau of Standards for inspection.

SEC. 11. The state inspector shall keep a complete record of standards, balances, and other apparatus in his possession, and take a receipt for the same from his successor in office.

SEC. 12. The state inspector of weights and measures shall be sworn, and shall give bond to the State for five thousand dollars, conditioned on the faithful discharge of his duties.

SEC. 13. The state inspector shall inspect all standards used by the county and municipal inspectors at least once in two years, and shall keep a record of same, and see that they are kept in proper adjustment with the state standards. He shall visit the various cities and towns of the State in order to inspect the work of the local sealers, and in the performance of his duty he may inspect the weights, measures, and balances of any person or corporation which are used for buying or selling goods, merchandise, or other commodities and for public weighing.

SEC. 14. The state inspector shall provide, at the expense of the State, the local sealers with the proper instruments, seals, or labels for marking weights, measures, and balances examined by him, and any person who forges or counterfeits such instruments, seals, or labels shall be liable to a fine not exceeding fifty dollars.

COUNTY AND MUNICIPAL SEALERS.

SEC. 15. Every county and municipality in the State shall appoint a sealer, with a sufficient number of deputies to inspect at least once every year every weight, measure, balance, or measuring device of any kind used in trade within the jurisdiction of said county or municipality.

SEC. 16. Any two or more local authorities may combine the whole or any part of their districts upon such terms and in such manner as may be agreed upon.

SEC. 17. An inspector appointed in pursuance of an agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

SEC. 18. Every county and municipality shall provide the local sealer with suitable standards, apparatus, and quarters to enable him to properly perform his duties, all of which shall be subject to the approval of the state inspector.

SEC. 19. It shall be the duty of the sealer to faithfully devote his time to the performance of the duties of his office, and to test all weights, measures, scales, beams, steelyards, and other machinery used for weighing or measuring in trade, within his district, at least once in every year; and, upon being notified, in writing, by any person that any weight, measure, scale, beam, steelyards, or other machinery for weighing or measuring any article intended to be purchased or sold in such district is inaccurate, or believed to be so, or not according to the standard, to at once make an examination of the same.

And in the exercise of such duties he shall have full police power to enforce any and all reasonable measures for testing such weights and measures, and also in ascertaining whether false or short weights and measures are being given in any sales or transfer of articles of merchandise taking place within such district.

SEC. 20. Every local inspector shall make an annual report of the weights, measures, and balances tested, together with an inventory of the standards and working apparatus, to the state inspector.

SEC. 21. All weights, measures, and balances which can not be made to conform to the standards shall be marked or stamped "cd." (condemned) by the sealer.

SEC. 22. The local sealer shall publish once a month the names and occupations of all persons convicted for the use of fraudulent weights, measures, balances, or measuring devices.

SEC. 23. Any person who neglects or refuses to produce for said sealer all weights, measures, or balances in his possession, or on his premises, or refuses to permit the sealer to examine the same, or obstructs the entry of the sealer or otherwise obstructs or hinders a sealer under this law, shall be liable to a fine not exceeding twenty-five dollars, and in a second offense of fifty dollars.

SEC. 24. A local standard which has become defective in consequence of any wear or accident, or has been repaired, shall not be legal, nor be used by the local sealer until it has been reverified by the state inspector.

SEC. 25. Any sealer of weights and measures shall forthwith, on his appointment, give bond in the sum of one thousand dollars for the due performance of the duties of his office, and for the safety of the local standards, and the stamp appliances for verification committed to his charge, and for the surrender immediately on his removal or cessation from office to the person appointed by the proper authority to receive them.

SEC. 26. If a sealer stamps a weight or measure without duly verifying the same by comparison with a local standard, or is guilty of any breach of duty imposed upon him

by law, or otherwise misconducts himself in the execution of his office, he shall be liable to removal or to pay a fine not exceeding two hundred dollars for each offense.

SEC. 27. A local standard shall not be deemed legal nor be used by the local sealer for testing any weight, measure, or balance unless it has been verified by the state superintendent within two years of the time at which it is used.

GENERAL REGULATIONS.

SEC. 28. No weight, measure, balance, or measuring device of any kind shall be used in trade until it has been examined and sealed by the state or local inspector.

SEC. 29. All computing devices shall be tested as to the correctness of the values, and all values, whether in money, figures, or graduations, shall be correctly placed, so that when any commodity is weighed thereon the money value registered shall be the true value of the commodity weighed.

SEC. 30. Every weight, except when the small size of the weight renders it impracticable, shall have the denomination of such weight stamped on the top or side thereof in legible figures or letters; and every measure of capacity shall have the denomination thereof stamped on the outside of such measure in legible figures and letters.

A weight or measure not in conformity with this section shall not be stamped by the state or local sealer.

SEC. 31. Every person who uses, or has in his possession for trade, any weight, measure, scale, balance, steelyard, or weighing machine which is false or unjust shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense fifty dollars, and any contract for gain, sale, or dealing made by the same shall be void, and the weight, measure, scale, balance, or steelyard shall be liable to be forfeited.

SEC. 32. A weight or measure duly stamped by an inspector shall be a legal weight or measure throughout the State, unless found to be false or unjust, and shall not be liable to be restamped because used in any other place than that in which it was originally stamped.

SEC. 33. Where any fraud is willfully committed in the using of any weight, measure, scale, balance, or steelyard, or weighing machine, the person committing such fraud, and every person party to the fraud, shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense fifty dollars.

SEC. 34. All dealers in milk and cream who use glass bottles or jars for the distribution of milk or cream to consumers shall bring in such bottles or jars to the office of the sealer of weights and measures in their respective cities and towns, to be sealed as aforesaid; but no fee shall be charged or received for sealing them. If a bottle or jar has once been sealed by the sealer of weights and measures, it shall not in any case be necessary to have it sealed again at any time while it is used for the distribution of milk or cream to consumers. Glass bottles or jars sealed under the provisions of this section shall not be legal measures except for the distribution of milk or cream to consumers.

SEC. 35. Every person who, in putting up in any bag, bale, box, barrel, or other package, any hops, cotton, wool, grain, hay, or other goods usually sold in bags, bales, boxes, barrels, or packages by weight or measure, puts in or conceals therein anything whatever, for the purpose of increasing the weight or measure of such bag, bale, box, barrel, or package, with intent thereby to sell the goods therein, or to enable another to sell the same, for an increased weight or measure, is punishable by fine of not less than twenty-five dollars for each offense.

The CHAIRMAN. Gentlemen, you have heard the report of the executive committee. There is a great mass of material for discussion and we want every delegate to have an opportunity to be heard, but in order to get through to-day we will have to follow some particular plan. What we want to bring out is the outline of a general law; and then I think we should submit it for final revision to the legal adviser of the Department of Commerce and Labor, who will probably be conversant with States rights, etc. He could then take what we have outlined and prepare it for national and state legislation. I will ask Mr. Fischer if he has any suggestions.

Mr. FISCHER. So far as the details are concerned, we need not argue over them so much. I think we could get the assistance of the Solicitor to put the bill in proper shape, if that is the sense of the meeting. It seems to me, however, we ought to fix the amount of the fines, penalties, etc. I have had mimeograph copies made of the report for the convenience of members in discussing the bill section by section.

Mr. PETTIS. May I ask, Mr. Chairman, what disposition is going to be made of this matter after we get through with it?

The CHAIRMAN. Whatever disposition the conference decides. It is entirely within the province of the delegates to decide what shall be done with the matter. I will ask Mr. Thomas, of the executive committee, if he has anything to say.

Mr. THOMAS. Mr. Chairman, there are some points in connection with certain paragraphs there that it seems to me could very well be changed to advantage; but suggestions as to what changes should be made I think ought to come in connection with a consideration of the report section by section. If this report of the committee is to be submitted by the officers of the conference and by the members here present to the several legislatures of the States with the view to obtaining legislation along the lines suggested in that report, it seems to me we had better make it as complete as we can, to suit local conditions as they are known to the members of the conference present. The more completely a suggested bill can cover the conditions in the field, the better it will be received by the legislative bodies of the States. At least that is my opinion. And if we undertake the consideration of the report in that way it seems to me it will be wise to take it up section by section.

The CHAIRMAN. The chair is ready to entertain a motion to proceed with a discussion of the bill.

On motion, it was agreed to consider the report of the executive committee section by section; and the secretary proceeded with the reading of the first paragraph.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Commerce and Labor is authorized to furnish a complete set of standard weights and measures adopted or accepted by the National Bureau of Standards to any State under the following conditions:

Mr. HASKELL. You spoke of "States;" does that include the District of Columbia?

The SECRETARY. It was intended to include the District of Columbia and the Territories. They are quite as important as the States, and should be included.

Mr. REICHMANN. I think it would be well to specifically designate what is included.

Mr. HASKELL. I move to amend the paragraph so as to include the Territories and the District of Columbia after the word "State."

The amendment was agreed to and the section adopted.

The secretary read section 1, which is as follows:

SECTION 1. That the office of state inspector be established.

Mr. HASKELL. I move that there be substituted for the word "inspector" the words "superintendent of weights and measures."

Mr. REICHMANN. The meaning of the words "inspector," "superintendent," and "commissioner" convey altogether different ideas in different States, on account of established customs in those States. I believe that we had better leave that to Congress.

The CHAIRMAN. In the bill now before the Massachusetts legislature a commissioner and deputy inspectors are provided for.

Mr. YODER. The state officer has a different function to perform than that to be performed by county or city sealers, and it seems to me that he might be properly termed "commissioner" or "superintendent" rather than "inspector," and the term sealer might more properly be reserved for these minor officers who do the actual work of testing and sealing in the field.

The CHAIRMAN. We ought to bear in mind that this office is going to be clothed with considerable dignity some day.

Mr. HAARER. If this movement continues to grow, as we hope it will, it may be, as I have observed with respect to other public officials appointed by the governors of the States, that in many cases they will desire to be called commissioners; they will not wish to be called sealers or inspectors. And I anticipate from my observations in con-

nection with other state organizations that if we were to call the state officers "sealers" or "inspectors," they would themselves soon be lobbying to have the title changed. Now, I am speaking very plainly, but this opinion is also the result of my observations of the deputies who have served under me. I do not blame them for it. It is a position that ought to be distinct and separate from the local officials, and I am very much in favor of the word "commissioner." I think it is a very good term. If there are no technical objections, I move to amend the section by substituting the word "commissioner."

Mr. WOOLF. I want to support that motion. Two years ago we appointed a dairy and food commissioner; but the people who do the inspecting in the dairy-inspection service are called inspectors. An inspector is some one who is supposed to be under the commissioner.

Mr. REICHMANN. The term "commissioner" has an altogether different meaning in New York. There we have a superintendent of insurance, not commissioner. I am not saying anything against the term "commissioner," but the point is, will it suit existing conditions in the State of New York?

The CHAIRMAN. I think we will find it altogether impossible to draft a law to comply with the conditions in each State.

Mr. WALL. In Pennsylvania the word "commissioner" is used, and suits very nicely. The subordinates are called inspectors, and might be sealers, for that matter.

It was finally agreed to substitute the words "commissioner of weights and measures" for "inspector" in section 1, and throughout the proposed law wherever the word "inspector" occurs, so that section 1 reads as follows:

SECTION 1. That the office of state commissioner of weights and measures be established.

The secretary read section 2, which is as follows:

SEC. 2. That facilities, such as suitable quarters and equipment, be provided for the state commissioner of weights and measures at the expense of the State or Territory.

On motion, section 2 was adopted as read.

The secretary read section 3:

SEC. 3. That the state commissioner of weights and measures be required to make an annual report to the governor, a copy of which shall be sent to the National Bureau of Standards, giving, among other information, the number of weights, measures, and balances tested, sealed, or condemned by him, together with an inventory of the standards and apparatus in his possession.

Mr. WELD. I move to amend that section by substituting the words "filed with" for "sent to" and "in addition to other information" for "among other information."

Mr. BENT. It seems to me, Mr. Chairman, that this report which the commissioner will be required to make might be more complete. It would be of interest to the governor to know the number of prosecutions, and various other information, which the commissioner could give. There might be some other detailed information that the Bureau of Standards might want to know.

The CHAIRMAN. The executive committee went into that question, and we thought that that might seem somewhat arbitrary, and so we suggested the phrase "such additional information as might be required." Perhaps it would be statistics in relation to his work. That phrase was suggested.

On motion, section 3 was adopted as amended, and reads as follows:

SEC. 3. That the state commissioner of weights and measures be required to make an annual report to the governor, a copy of which shall be filed with the National Bureau of Standards, giving, in addition to other information, the number of weights, measures, and balances tested, sealed, or condemned by him, together with an inventory of the standards and apparatus in his possession.

The secretary read section 4:

SEC. 4. No weighing or measuring device shall be used for the purpose of trade until the type has been approved by the National Bureau of Standards. Any type so approved may be used anywhere in the United States: *Provided*, That nothing in this act shall prevent the state commissioner of weights and measures or local inspector from condemning such device if its operation should be defective.

Mr. WELD. Is that a clause which would refer to all manufacturers of scales and other appliances?

Mr. FISCHER. Yes; if they devise a new type. As it is now, a manufacturer can make a certain type of scale and sell it throughout the country. By and by it is objected to in one State, and can not be sold in that State, but can be sold in any other. It seems to me that if there is any objection to a type, and it is sustained, that the Bureau ought to have authority to withdraw its indorsement. That is done in every European country. No machine or measuring device can be sold anywhere in England unless it has been approved by the National Standards Department, and it seems to be rather an essential requirement. That is the reason back of it.

Mr. WELD. You would not compel a manufacturer of scales to submit all of his scales, but only one, to show the type?

Mr. FISCHER. The Bureau of Standards has no authority at present to compel a manufacturer of scales to conform with any requirements. Very often a little authority exercised by the Bureau in this respect would settle costly controversies between rival manufacturers. Of course, if any particular type gets out of order and does not operate properly, a local inspector should have the authority to condemn it; but if the Bureau or some department of the National Government does not have this authority, then a type of machine may be permitted in one State and not in another. That would be a great hardship for the manufacturers and greatly complicate their business.

Mr. BECK. What does type mean?

Mr. FISCHER. Your idea is that the term "type" is not definite enough.

Mr. BECK. Yes; type is too indefinite.

Mr. FISCHER. Of course, we have a definite thing in mind when speaking of a type. A weighing device with a drum is one type, and an equal arm balance is another. Such devices are occasionally tested by the Bureau, but we have no authority to prohibit the sale and use of such scales, even if the construction should be such as to facilitate fraud. We merely test the particular apparatus submitted and report to the owner the results of our investigations.

Mr. REICHMANN. If the Bureau had the authority to sanction or prohibit the manufacture and sale of any type, it would only be necessary to test one sample.

Mr. FISCHER. It seems to me it would save a great deal of confusion to have some official or some bureau of the Government decide whether a type is a proper one or not. The Bureau should also have authority to withdraw its sanction of a type should it subsequently be found that it does not operate properly or is defective in design. We do not claim to be infallible, and may be mistaken. I think that when new types were submitted the Bureau would endeavor to get the opinion of this body. If it could be deferred until we had a convention we would certainly submit the question to this body before we passed on it.

Mr. YODER. I would like to ask if this section which we are considering now is to be submitted to our several state legislatures, or is it part of a national law?

Mr. FISCHER. It is intended as the basis for a national law.

Mr. YODER. Some one said yesterday that as the Government controlled the making of the money so it should also supervise the weights and measures. So it should also pass upon any new types

of weighing devices or measuring devices before they are put upon the market. I am very strongly in favor of that paragraph. The several state legislatures would have to conform to that law, although they might differ, perhaps, in the method of carrying it out.

Mr. WOOLF. I believe it is the opinion of most of the members present that the provisions of this paragraph are very good. The only question that might arise is as to the phraseology from a legal standpoint, but I believe that is to be left to the Solicitor of the Department.

Mr. FISCHER. Yes.

Mr. WOOLF. I would suggest that after we adopt all these various paragraphs, a motion be made that the paragraphs may be altered by the Solicitor, so long as the alterations conform to the general idea and are made exclusively from a legal standpoint.

Mr. FISCHER. I would like to say that that is what the committee had in mind. I realize myself that the phraseology is very defective, indeed, from a legal point of view. The provisions were very hurriedly framed. A great many of the paragraphs were taken from English laws, some from German, and some from our own state laws, etc., and the arrangement was not expected to be final.

Mr. REICHMANN. Mr. Chairman, I move that the clause which I have just handed to the secretary be added to section 4.

The secretary read the clause, which is as follows:

Monthly bulletins giving a description of any weighing or measuring device approved by the National Bureau of Standards shall be sent to the state officer of weights and measures of each State.

Mr. FISCHER. Just as soon as the English Board of Trade approves a type, an illustrated description of it is sent to all inspectors.

Mr. PETTIS. Would the publishing of a monthly bulletin require any legislation? Is not the Bureau now authorized to send out such information without additional action by Congress?

Mr. REICHMANN. Doctor Stratton and Mr. Fischer will not be here forever, and we are looking to the future.

On motion, section 4, with the amendment offered by Mr. Reichmann, was adopted, and the section now reads:

Sec. 4. No weighing or measuring device shall be used for the purpose of trade until the type has been approved by the National Bureau of Standards. Any type so approved may be used anywhere in the United States: *Provided*, That nothing in this act shall prevent the state commissioner of weights and measures or local inspector from condemning such device if its operation should be defective.

Monthly bulletins giving a description of any weighing or measuring device approved by the National Bureau of Standards shall be sent to the state officer of weights and measures of each State.

The secretary read section 5, and on motion it was adopted without amendment:

SEC. 5. Model regulations for the guidance of the state commissioner of weights and measures and local inspectors shall be prepared by the Bureau of Standards in cooperation with the National Association of State Commissioners.

The secretary read section 6:

SEC. 6. The model regulations, prepared and issued by the National Bureau of Standards, shall govern the procedure to be followed by the state commissioner of weights and measures and local inspectors in inspecting, testing, and sealing all weights, balances, or measuring devices.

The CHAIRMAN. I do not believe that there would be any trouble in getting all sealers to work according to regulations prepared by the Bureau of Standards.

Mr. FISCHER. Such model regulations are prepared by the national standards departments in the principal European countries, and are used by the local inspectors.

Mr. BENT. It seems to me that section 5 as it now reads is almost the same as section 6, which we are discussing.

Mr. FISCHER. Section 5 provides that the regulations shall be prepared by the Bureau of Standards, but it does not state that the state sealers shall use them.

Mr. BENT. We are going to rely on the Bureau of Standards for the technical nature of this, and I think it is the proper authority to appeal to and to guide this movement. I therefore move that section 6 be combined with section 5, for in reading the two sections I notice that it will be necessary to combine them in order to get the sense of them.

The CHAIRMAN. You wish to give the Bureau authority to establish these regulations?

Mr. BENT. That is exactly what I think about it.

Mr. REICHMANN. Unless a State does by law adopt it the state sealer could establish his own regulations.

The CHAIRMAN. You think it would be better to have national legislation rather than state legislation?

Mr. REICHMANN. Yes. Suppose a State does not prescribe by law what regulations the sealer shall use, then he can use any that he sees fit.

Mr. WELD. It seems to me that this section properly belongs under the proposed state legislation. The first five sections are intended for national legislation, and section 5 provides that the Bureau of Standards draw up regulations for the guidance of the local inspectors, and then, under the proposed state legislation, the local

inspectors could be required to adopt the regulations prepared by the Bureau of Standards. If we can not get the legislatures to pass these laws and to require local inspectors to conform to them, we might just as well go home. We have laws concerning seals and marks and everything of that kind at the present time. What we desire now is to get uniform legislation. If we can get the legislatures interested in this matter to the extent of adopting legislation uniform with the other States, I do not believe that section 6 is going to offer much difficulty.

Mr. REICHMANN. I believe the clause really belongs in the sixth section.

Mr. HAARER. I agree with the gentleman from New York and believe he is right in this matter, for this reason: At the present time many of the laws in the various States are somewhat indefinite and their enforcement is lax. Now, if regulations were laid down by the Bureau of Standards, I think it would hasten state legislation on the subject.

Mr. BENT. I desire to emphasize the importance of this. It seems to me one of the most important questions that has come up. If the Bureau of Standards can not be relied upon as a guide for the carrying out of the duties of the various inspectors throughout the States, then we will have no guide for the performance of the details of this work. I think it is highly important that this clause be made a part of the proposed act to be passed by Congress relative to the Bureau of Standards.

The CHAIRMAN. Suppose section 6 is submitted to the State of Connecticut, for instance, and the legislature does not see fit to adopt it, but if it is already adopted by the National Government, the State will have to follow it.

On motion section 6 was adopted as read, as part of the proposed national legislation.

The secretary read section 7:

SEC. 7. The net quantity of the contents of all packages shall be plainly stated in terms of weight or measure on the outside of the package.

Mr. FISCHER. If we are going to recommend any national legislation it seems to me this is a case where we ought to recommend it. This same paragraph was stricken from the national pure-food bill. We should put ourselves on record as being in favor of it, and if we indorse such a measure it might go through. It was opposed by the canners, who did not want to state on the outside how much their cans contained.

The CHAIRMAN. I am not in sympathy with that.

Mr. HAARER. I do not see how a State could enforce it in regard to interstate commerce.

Mr. REICHMANN. A State can enforce it, and should make it a misdemeanor on the part of anyone selling goods in the State the weight or measure of which is not plainly stated.

The CHAIRMAN. It will jeopardize the whole bill by antagonizing a certain class of dealers interested. They are doing all they can to prevent any legislation of this kind. The grocers in my State adopted a resolution in regard to weight appearing on packages, and the national grocers were going to adopt them, but that is going to be impossible in this bill.

Mr. FISCHER. I have been told by Representative Mann that he intends to introduce that question and try to have it passed next Congress. He has by no means given it up. So it seems to me if we could indorse it here for adoption by Congress it would assist him.

On motion section 7 was adopted as read, as part of the proposed national legislation.

The secretary read section 8 (first section of proposed state legislation):

SEC. 8. The weights, measures, and balances received from the United States, under a resolution of Congress approved June fourteenth, eighteen hundred and thirty-six, and such new weights, measures, and balances as shall be received from the United States as standard weights, measures, and balances in addition thereto or in renewal thereof, shall be the authorized standards by which all county and municipal standards of weights and measures shall be tried, proved, and sealed.

On motion, section 8 was adopted without amendment.

The secretary read section 9:

SEC. 9. There shall be a state commissioner of weights and measures at an annual salary of at least two thousand dollars, said commissioner to be appointed by the governor with the advice and consent of the senate.

Mr. REICHMANN. I think that we had better leave out the question of salary, making it read that "there shall be a commissioner at an annual salary of blank dollars, to be appointed by the governor, with the advice and consent of the Senate."

The CHAIRMAN. In some States the appointments are not approved by the senate. Personally I think it very unwise to attempt to dictate to any legislature what to pay a state officer. I think we shall encounter opposition on that point at once if we attempt it.

Mr. HAARER. I move to amend the section so that it will read:

That there shall be a state commissioner of weights and measures to be appointed by the governor in such manner and at such salary as may be fixed by the respective state legislatures; and deputy commissioners may be appointed as required.

On motion, section 9 was adopted as amended, and reads:

SEC. 9. There shall be a state commissioner of weights and measures, to be appointed by the governor in such manner and at such salary as may be fixed by the respective State legislatures; and deputy commissioners may be appointed as required.

The secretary read section 10:

SEC. 10. The state commissioner of weights and measures shall have the exclusive custody and control of the state standards received from the National Government, which shall be kept in a fireproof room provided by the State when not in actual use. He shall maintain the state standards in good order, and submit them once in ten years to the National Bureau of Standards for inspection.

MR. FISCHER. I would like to ask the chairman if once in ten years is sufficient to test the state standards.

MR. REICHMANN. You mean for verification? You are bringing up the same question that was brought up in the executive committee. We spoke of balances and standards. It would not mean that balances and the working apparatus should be sent here. It was suggested by Mr. Palmer that a federal inspector go from State to State to see whether the balances are in order, and only such apparatus as could not be thus verified need be sent to the Bureau. It would be rather expensive to send all the apparatus down here.

MR. FISCHER. It says the state standards; nothing else.

MR. REICHMANN. Previously we referred to the balances as state standards.

THE CHAIRMAN. Do you not supply States with standard balances, Mr. Fischer?

MR. FISCHER. We have not done that for many years. The only reason the States were supplied with balances in the early days was because they could not be purchased, and the Government felt it was just as necessary to furnish balances as standards, but I do not believe that any State has been furnished with them in the last ten years.

On motion, section 10 was adopted as read.

The secretary read section 11, which was adopted without amendment:

SEC. 11. The state commissioner of weights and measures shall keep a complete record of standards, balances, and other apparatus in his possession, and take a receipt for the same from his successor in office.

The secretary read section 12, which was adopted without amendment:

SEC. 12. The state commissioner of weights and measures shall be sworn and shall give bond to the State for five thousand dollars, conditioned on the faithful discharge of his duties.

The secretary read section 13, which was adopted without amendment:

SEC. 13. The state commissioner of weights and measures shall inspect all standards used by the county and municipal inspectors at least once in two years and shall keep a record of same, and see that they are kept in proper adjustment with the state standards. He shall visit the various cities and towns of the State in order to inspect the work of the local sealers, and in the performance of his duty he may inspect the weights, measures, and balances of any person (or corporation) which are used for buying or selling goods, merchandise, or other commodities and for public weighing.

Mr. REICHMANN. I move to insert after the words "state commissioner of weights and measures" the words "or deputy commissioner." I am obliged to visit every city and town personally, because the law does not provide for a deputy superintendent with authority to assume the duties of the superintendent of weights and measures.

Mr. WELD. I believe that point is important, and I second Mr. Reichmann's motion.

The CHAIRMAN. Do you want to state what the functions of the deputies shall be and what authority they shall have?

Mr. WELD. Deputy commissioners will have the same authority as commissioners—that is, they will represent the commissioners.

The CHAIRMAN. It would be advisable to specify the duties of the deputy, otherwise the courts would have to be called upon to construe as to what authority he had. It might be claimed that he was only the deputy commissioner and he was not authorized by law to take up the duties of the commissioner.

Mr. WELD. My idea is to leave the matter undefined; merely provide here for deputies, and leave open the question as to whether these deputies are to be appointed by the governors or the commissioners themselves, and also leave the specific duties of the deputies unspecified.

On motion, section 13 was amended and adopted, and reads as follows:

SEC. 13. The state commissioner of weights and measures, or deputy commissioner, shall inspect all standards used by the county and municipal inspectors at least once in five years, and shall keep a record of same, and see that they are kept in proper adjustment with the state standards. He shall visit the various cities and towns of the State in order to inspect the work of the local sealers, and in the performance of his duty he may inspect the weights, measures, balances of any person (or corporation)

which are used for buying or selling goods, merchandise, or other commodities and for public weighing.

The secretary read section 14:

SEC. 14. The state commissioner of weights and measures shall provide, at the expense of the State, the local sealers with the proper instruments, seals, or labels for marking weights, measures, and balances examined by him, and any person who forges or counterfeits such instruments, seals, or labels shall be liable to a fine not exceeding fifty dollars.

The CHAIRMAN. I objected to this before the executive committee because I do not think it would be good policy for the state commissioner to attempt to supply local sealers with seals, etc. For instance, in the State of New York, the business of supplying seals to the local sealers would involve the expenditure of thousands of dollars annually. In Massachusetts we have adopted this year a law providing that the seals of the sealers of weights and measures shall be of a uniform type and that they shall be approved by the state department. The town and city seals bear, where possible, the imprint of the local seal, and in order to have this appear on the seal it is necessary that they shall be printed by the local printers, who can readily secure a copy of this seal. If we were to have them printed in Boston, we would have to send all over the State to get the individual seals of the different towns. I do not think it would be wise for any state officer to attempt to control the issue of supplies to all city sealers.

Mr. PETTIS. I do. It may not do in larger States, but that plan works very well in Rhode Island. Every year, before the 1st of January, I send to every town and sealer a seal stamp like I showed you yesterday, for tin and copper measures, and a large one for dry measures, and a branding iron with which to brand baskets. I supply them and the town pays for them. We have five or six different-colored seals. This year the color is red, next year it will be green, and the next year after yellow.

Mr. REICHMANN. I thoroughly agree with the chairman in what he says. It would be a considerable expense to a large State to supply the cities. No county, city, or town is going to object to spending two or three hundred dollars a year to provide appropriate seals and stamps, but if you were to ask the legislature of the State of New York for \$4,000 to buy seals and stamps for the different cities and towns you would meet objection.

Mr. FISCHER. I move we pass over that section and take it up in connection with the duties of county and municipal sealers.

The motion was carried.

The CHAIRMAN. Section 14 has been passed over and section 15 is to be called section 14.

The secretary then read section 14, which was adopted without amendment:

SEC. 14. Every county and municipality in the State shall appoint a sealer, with a sufficient number of deputies to inspect at least once every year every weight, measure, balance, or measuring device of any kind used in trade within the jurisdiction of said county or municipality.

The secretary read section 15:

SEC. 15. Any two or more local authorities may combine the whole or any part of their districts, upon such terms and in such manner as may be agreed upon.

Mr. THOMAS. It seems to me in connection with sections 14 and 15 that there is going to be some difficulty on account of the different methods of subdividing the States into local governing sections. In Ohio the county is the municipal unit next to the State. In some States there are no county organizations, and what would suit Ohio would not suit those States having no county organizations. The county organization I think prevails in most of the States, and I think it would be better to make such provision, as is already done in some of the States, that, in case of the failure of any township or town or village to appoint an inspector as provided for in these two sections, the duty of the county inspector should be exercised by the county auditor or treasurer of such localities.

The CHAIRMAN. How many States are there that have no provision for the appointment of local sealers of weights and measures?

Mr. FISCHER. There are a number of such States.

The CHAIRMAN. I thought every State had provided for that. There might be included some phrase to the effect that sealers shall be appointed consistent with the present law, whether county, town, or borough.

Mr. FISCHER. I think we can rely on the States to modify this to suit local conditions. In the case of Rhode Island, having only township organizations, the law would have to read "every township," and in the case of Massachusetts, "every city and town." The States could modify this to suit their conditions.

Mr. REICHMANN. I move the adoption of this section, with the understanding that the secretary explain that broad meaning to the Solicitor of the Department.

The CHAIRMAN. Do you not want the same thing to apply to section 14?

Mr. REICHMANN. Yes.

Section 15 was then passed, with the understanding that it was adopted subject to amendment by the state authorities.

The secretary read section 16:

SEC. 16. An inspector appointed in pursuance of an agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

Mr. WELD. In many States there are counties in which there is no town of any size.

Mr. FISCHER. The idea is for two or three neighboring counties to combine where each one separately could not afford to have a sealer.

Mr. WELD. Would the county officer have jurisdiction within a city located within the county?

Mr. FISCHER. I believe we will have to leave the matter to the States.

Mr. WELD. That is just my idea.

On motion, section 16 was adopted as read.

The secretary then read section 17:

SEC. 17. Every county and municipality shall provide the local sealer with suitable standards, apparatus, and quarters to enable him to properly perform his duties, all of which shall be subject to the approval of the state commissioner of weights and measures.

On motion, section 17 was adopted without amendment.

The secretary then read section 18:

SEC. 18. It shall be the duty of the sealer to faithfully devote his time to the performance of the duties of his office, and to test all weights, measures, scales, beams, and steelyards, or other machinery used for weighing or measuring in trade, within his district, at least once in every year; and, upon being notified, in writing, by any person that any weight, measure, scale, beam, or steelyards, used in trade, or other machinery for weighing or measuring any article intended to be purchased or sold in such district, is inaccurate, or believed to be so, or not according to the standard, to at once make an examination of the same.

And in the exercise of such duties he shall have full police power to enforce any and all reasonable measures for testing such weights and measures, and also in ascertaining whether false or short weights and measures are being given in any sales or transfer of articles of merchandise taking place within such district.

Mr. WOOLF. The question of a deputy is not considered there.

Mr. FISCHER. We have not provided for any deputy at all for these local inspectors.

Mr. YODER. I think each State would regulate that matter.

Mr. FISCHER. If a deputy is appointed, he will be given authority to act as inspector.

The CHAIRMAN. If there is no objection, the words "or deputy sealer" will be inserted where necessary.

Mr. HAARER. We are making quite a few changes in these various sections and I would suggest that, after they have all been adopted, there be a final resolution made for the adoption of the entire report as amended; and that there be embodied in the resolution a request that the Solicitor make all sections conform with each other. I think that could be left very well to the Solicitor, and is what we should do.

The CHAIRMAN. I think that must be done.

On motion, section 18 was adopted subject to amendment.

The secretary read section 19:

Sec. 19. Every local inspector shall make an annual report of the weights, measures, and balances tested, together with an inventory of the standards and working apparatus, to the state commissioner of weights and measures.

On motion, section 19 was adopted after being amended to read as follows:

Sec. 19. Every local sealer shall make an annual report of the weights, measures, and balances tested by him, together with an inventory of the standards and working apparatus, to the state commissioner of weights and measures.

The secretary read section 20:

Sec. 20. All weights, measures, and balances which can not be made to conform to the standards shall be marked or stamped "cd." (condemned) by the sealer.

Mr. REICHMANN. To "condemn" does little good. They ought to be "confiscated." There is no reason why, if a weight, measure, or balance is condemned, it can not be used again in trade, unless it is destroyed.

The CHAIRMAN. Why should a man lose his property, even if it is not correct? If milk jars are condemned a man can use them for some other purpose, or his wife can use them for ketchup or preserves. I do not believe in confiscation.

Mr. HASKELL. If a scale is in such condition that it has to be condemned, why should it not be put out of use? Why should it not be destroyed? It is very apt to get into use again. The purpose is to get out of use weights, measures, and balances of any kind that are not correct and up to standard. In the District of Columbia if we find a scale that is not fit to be used, and in such condition that it can not be repaired, we destroy it—put it out of use. If the man wants the old iron, we give it to him, but it can not be used as a scale again.

Mr. REICHMANN. I was in Mr. Greiner's office in Chicago talking to his first deputy, who told me that they had tried the experiment of marking some measures "condemned." The next week they found the same measures in use over in the other end of the city. In Chicago if the apparatus can not be repaired they destroy it.

Mr. HASKELL. In the past we allowed the use of such scales in the manner mentioned, and I do not think there was hardly a day went by that we did not find those scales in junk dealers' shops, they having been sold to the dealer for 50 cents or \$1 or whatever the owners could get for them. The junk dealer would fix them up for use. We would find that they had been in use again for two or three months before we discovered them. So we have adopted a law in the District of Columbia which requires that when a scale is condemned as unfit for use it shall be destroyed by the sealer.

Mr. PETTIS. In Rhode Island when we find a scale that is out of order, and it can not be readily repaired, we put a card on it condemning it, stating that this spring, balance, or platform scale, as the case may be, has been examined and found incorrect. But if the scale is beyond repair we break it up.

The CHAIRMAN. In Massachusetts we have some dealers who are using almost a cartload of bottles a week, which they submit to the sealer. If these bottles do not conform to the standards, he marks them "condemned," and the man can not use them. If we do not break them up the man has an opportunity to sell them and in that way does not lose all he has paid for them.

Mr. REICHMANN. He does not have to lose anything. If he makes a contract with the firm that makes the bottles, requiring that they be up to the standard, and that he will only pay for those that are, he will be protected.

The CHAIRMAN. We should make the penalty for using condemned articles severer than the ordinary penalty for false weights and measures; but why should we take a man's property from him?

Mr. HASKELL. Why is a counterfeit coin taken from a man? It is as bad to use counterfeit weights and measures as it is to use counterfeit money. The Government does not give a man back the counterfeit money, and so the use of condemned articles should be destroyed.

The CHAIRMAN. When the man made the counterfeit money he knew it was spurious, but the man making these articles for use in trade can not make them mechanically perfect. The dealer in a spirit of fairness brings them to the sealer, and says, "I wish to use these in trade; test them." The sealer tests them and condemns

them. He can put on the result of the test; he can mark the bottle all over with the word "condemned," but there is no reason why the bottles should be taken away from him or that he be prosecuted. Our law says that bottles can be seized for evidence in case there is a prosecution.

Mr. HASKELL. We condemned for one of the railroad companies a 150-ton scale and destroyed the use of it, but we left the metal. We break the levers so that a scale can not be used again.

The CHAIRMAN. I do not believe in that.

Mr. HASKELL. If milk bottles are not destroyed, they are liable to get back into use again. As Mr. Pettis said, Connecticut had to suffer by getting condemned milk bottles from Rhode Island.

The CHAIRMAN. Let Connecticut wake up to the fact that it is getting condemned milk bottles.

Mr. HAARER. Why not settle the difficulty by adding a clause saying "or in his discretion destroy it?" There may be cases where it would not be advisable to destroy them. In the case of a pair of poor scales, it would be a good thing to destroy them.

Mr. REICHMANN. If we leave it to the sealer, he will be criticised by everybody, by the dealer if he destroys and by the public if he does not. He should be authorized by law.

Mr. PETTIS. I move to strike out the word "condemned" and substitute the words "shall be destroyed by the sealer at his discretion."

Mr. REICHMANN. I second the motion.

Mr. FISCHER. I do not think there is any doubt, Mr. Chairman, but what they ought to be destroyed. As to whether it is desirable to pass a law to that effect, I am not positive. Personally I think it ought to be done, and if the people are not educated up to that point they ought to be.

Mr. THOMAS. I am opposed to that motion, because I do not believe a sealer can use discretion as to destroying apparatus. Such a provision would cause him to discharge his public duties in a way that would decrease his efficiency.

Mr. BENT. I agree with the gentleman. It would naturally substitute the sealer to severe criticism. I am opposed to the motion.

The CHAIRMAN. The question comes on the amendment to the motion; that is, to substitute the words "shall be destroyed by the sealer at his discretion," for the word "condemned."

The motion was put and not carried.

Mr. BENT. It seems to me that the use of the device might be destroyed without confiscation of the property. A word might be added that will give some latitude.

Mr. YODER. How would you destroy the usefulness of a milk bottle, and yet not destroy it altogether?

Mr. HASKELL. In regard to bottles, we know that in the District of Columbia an agent will go to a dealer and ask "Do you want short bottles, or do you want correct bottles?" and if the agent persuades him to take short bottles they will be condemned when they come under our inspection. If the bottles are short and he can not use them here, he will ship them to some other city. All you have to do is to be firm, and say that such short weights, scales, or measures of any kind can not be used, and the manufacturers will not make them. They will manufacture only what they can sell. In the District of Columbia to-day only 5 per cent of our milk bottles are incorrect. Three years ago it was exactly opposite; there was only 5 per cent that were standard. We have broken that up by being firm and insisting upon having a standard bottle. Bottles can be made within a dram of standard capacity.

The CHAIRMAN. How much is your tolerance?

Mr. HASKELL. Practically the same as in Massachusetts.

The CHAIRMAN. Would the regulations of the Bureau of Standards allow us to establish tolerances?

Mr. FISCHER. The regulations would contain tolerances.

Mr. HASKELL. We do not seal milk bottles in the District of Columbia. If on our first visit to a dairy we find any short bottles, we notify them that those bottles can not be used. We give them a formal notice by a visit to their places. If upon a second visit to the place we find the dealer is still using short bottles, we immediately take him into police court and prosecute him for using short measure. It has required only a very few prosecutions to teach the people when ordering to insist upon correct bottles being delivered. We also have the authority to stop a milk wagon on the street and inspect for short bottles. If we find any, we take the man into the police court.

The CHAIRMAN. Are you allowed under your present law to pass on milk bottles as measures and still not seal them?

Mr. HASKELL. Yes.

On motion, section 20 was amended to read as follows, and adopted:

SEC. 20. All weights, measures, and balances which can not be made to conform to the standards shall be destroyed by the sealer.

The secretary read section 21:

SEC. 21. The local sealer shall publish once a month the names and occupations of all persons convicted for the use of fraudulent weights, measures, balances, or measuring devices.

Mr. BENT. I move to amend the section by substituting the words "state commissioner of weights and measures" instead of "local sealer." In small communities local sealers are apt to be influenced in a way that a state official would not.

Mr. WOOLF. I second the motion.

Mr. FISCHER. Would that not require the local sealer to report to the state commissioner?

Mr. BENT. Exactly. Then it should read this way: "The local sealer shall report to the commissioner and the commissioner cause same to be published."

Mr. BECK. Where would you have that published?

The CHAIRMAN. Leave it to the judgment of the state commissioner.

Mr. BECK. It ought to be done near home.

Mr. BENT. Publicity in a matter of this kind is highly important. Publicity is the greatest rectifier of all these irregularities. If it is not published in a daily paper, it will do little good. There are all kinds of irregularities in little local papers.

Mr. THOMAS. In what sense is the word "convicted" used here; in the court sense?

Mr. FISCHER. That is the intention. If a person is merely charged with an offense and then acquitted by the court, the case would not be published.

Mr. BENT. With Mr. Woolf's consent, I will withdraw my former motion and move an amendment to section 21 so as to make it read as follows:

The local sealer shall report monthly to the state commissioner of weights and measures the names and occupations of all persons convicted for the use of fraudulent weights, measures, balances, or measuring devices, who shall publish the same in a daily paper of general circulation throughout the State.

Mr. Woolf consented to the withdrawal of the former motion.

The motion was carried.

Mr. HASKELL. I want to offer a resolution that the National Bureau of Standards prepare a uniform table of the standard weights per bushel of all commodities used in general commerce in the several States and Territories and the District of Columbia, to be submitted as one of the recommendations of this convention and covered in our recommendations to Congress. I offer this for the reason that the Bureau of Standards has published a table which shows that very few of the States have the same weight for the same commodity. Why

it should be so I can not understand. As the gentleman from Georgia said, in his State one commodity is required to be a certain number of pounds to the bushel, and across the river it is 2 pounds more.

The CHAIRMAN. We have 2 pounds difference in a bushel of onions between Massachusetts and Rhode Island.

Mr. HASKELL. In some of the States 56 pounds is a bushel of potatoes, and in some it is 60. In almost all the States a ton of coal is 2,000 pounds, while in the District of Columbia it is 2,240 pounds. I know the Bureau of Standards has paid a great deal of attention to this matter and has already prepared tables showing the weight of the different commodities in the several States, and it seems to me a recommendation from this body to Congress might have effect in bringing about a uniform system. I would like to hear from Mr. Fischer on this.

Mr. FISCHER. Personally, I have rather avoided that question. It seems to me it is altogether wrong to state that a bushel of wheat or a bushel of potatoes shall weigh a certain amount. I hope it will be possible for us to adopt a new unit, 100 pounds or something of that sort. To perpetuate all these bushels which are not bushels but merely certain weights called bushels, is bad practice.

Mr. YODER. I raise oats that perhaps by the bushel measure weigh 40 pounds. My neighbor's oats will not weigh over 35 pounds. If the measure is taken instead of the weight he would be getting the benefit, while I would be losing on every bushel that I sold. How will we get around that?

Mr. FISCHER. In that case it is fairer to sell by weight than by capacity.

Mr. YODER. In the State of Montana no attention is paid to the bushel. Everything is sold by the pound.

Mr. PETTIS. Eggs should be sold by weight.

Mr. FISCHER. California has adopted a cental of 100 pounds. If we get Congress to legalize these bushel standards, it will be much more difficult to displace them afterwards.

Mr. BROWN. Fix it so that where sold by the bushel it will be so stated.

Mr. FISCHER. The fact that the bushel is different in the different States would make it easier for us to adopt some other standard, and for that reason I would not like to see Congress fix the weights. It would make it very difficult to adopt a new unit later. In California everything is sold by the cental.

A motion to adjourn for luncheon was carried.

FOURTH SESSION (AFTERNOON OF FRIDAY, MAY 17, 1907).

The CHAIRMAN. We will come to order now, gentlemen, and take up the remainder of the proposed law. I will ask the secretary to read section 22.

The secretary read section 22:

SEC. 22. Any person who neglects or refuses to produce for said sealer all weights, measures, or balances in his possession, or on his premises, or refuses to permit the sealer to examine the same, or obstructs the entry of the sealer, or otherwise obstructs or hinders a sealer under this law, shall be liable to a fine not exceeding twenty-five dollars, and in a second offense of fifty dollars.

The CHAIRMAN. The section reads "all weights." Does that mean weights that are used and provided for in section 12, or does it mean weights that are used for the convenience of the owner?

Mr. FISCHER. I move that we modify that so as to read "in his possession and used in trade."

On motion, section 22 was adopted as amended, and reads as follows:

SEC. 22. Any person who neglects or refuses to produce for said sealer all weights, measures, or balances in his possession, and used in trade, or on his premises, or refuses to permit the sealer to examine the same, or obstructs the entry of the sealer, or otherwise obstructs or hinders a sealer under this law, shall be liable to a fine not exceeding twenty-five dollars, and in a second offense of fifty dollars.

The secretary read section 23:

SEC. 23. A local standard which has become defective in consequence of any wear or accident, or has been repaired, shall not be legal, nor be used by the local sealer until it has been reverified by the state commissioner of weights and measures.

On motion, section 23 was adopted as read.

The secretary read section 24:

SEC. 24. Any sealer of weights and measures shall forthwith, on his appointment, give bond in the sum of one thousand dollars for the due performance of the duties of his office, and for the safety of the local standards, and the stamp appliances for verification committed to his charge, and for the surrender immediately on his removal or cessation from office to the person appointed by the proper authority to receive them.

The CHAIRMAN. Would you not provide for deputy sealers?

Mr. FISCHER. I move that the section be amended to read "any sealer or deputy sealer" instead of "any sealer."

On motion, section 24 was adopted as amended, and reads as follows:

SEC. 24. Any sealer or deputy sealer of weights and measures shall forthwith, on his appointment, give bond in the sum of one thousand dollars for the due performance of the duties of his office, and for the safety of the local standards and the stamp appliances for verification committed to his charge, and for the surrender immediately on his removal or cessation from office to the person appointed by the proper authority to receive them.

The secretary read section 25:

SEC. 25. If a sealer stamps a weight or measure without duly verifying the same by comparison with a local standard, or is guilty of any breach of duty imposed upon him by law, or otherwise misconducts himself in the execution of his office, he shall be liable to removal, or to pay a fine not exceeding two hundred dollars for each offense.

MR. PETTIS. I move its amendment by inserting the words "or deputy sealer" after the word "sealer."

MR. WELD. If a man is fined, should he be allowed to remain in office? The section reads, "shall be liable to removal or to pay a fine," etc.

MR. FISCHER. It should depend on how grave the offense was.

THE CHAIRMAN. I think the sentiment would be so strong against him after he had been fined for a breach of duty that it would not do to keep him.

MR. FISCHER. Are there not cases where deputies violate some of the rules where the offense is not sufficiently grave to dismiss them, but where a fine would be sufficient punishment?

MR. HASKELL. The sealer in the District of Columbia can suspend, but it requires the action of the Commissioners to dismiss.

MR. FISCHER. I merely make that as a suggestion.

The amendment was seconded and, on motion, the section was adopted as amended, and reads as follows:

SEC. 25. If a sealer or deputy sealer stamps a weight or measure without duly verifying the same by comparison with a local standard, or is guilty of a breach of any duty imposed upon him by law, or otherwise misconducts himself in the execution of his office, he shall be liable to removal or to pay a fine not exceeding two hundred dollars for each offense.

The secretary read section 26:

SEC. 26. A local standard shall not be deemed legal nor be used by the local sealer for testing any weight, measure, or balance unless it has been verified by the state superintendent within two years of the time at which it is used.

MR. REICHMANN. I move to amend the section so that it will read, after the word "balance," "unless it has been verified by the

state commissioner of weights and measures within at least five years of the time at which it is used."

Mr. BECK. I believe that each State will regulate that for itself. I should think that is a matter we need not discuss here.

The CHAIRMAN. The States want something as a guide. This would be more a suggestion than anything else. I think that five years is often enough.

Mr. THOMAS. Section 13, which has already been acted upon, provides that the state commissioner of weights and measures shall inspect all standards used by county and municipal inspectors at least once in two years. Why should we make a change here?

The CHAIRMAN. We will have to make those two sections conform with each other. I do not believe it will be practicable to make an inspection of standards at least once in two years. What do you think about it, Mr. Reichmann, in the State of New York?

Mr. REICHMANN. I do not think that would suit New York.

The CHAIRMAN. I think five years would be the proper limit. A set of standards ought to go for five years used only for standardizing. They would not be used a dozen or fifteen times at the outside.

The amendment was carried, and, on motion, section 26, as amended, was adopted:

SEC. 26. A local standard shall not be deemed legal nor be used by the local sealer for testing any weight, measure, or balance unless it has been verified by the state commissioner of weights and measures within at least five years of the time at which it is used.

The secretary read section 27, under the head of "General regulations:"

SEC. 27. No weight, measure, balance, or measuring device of any kind shall be used in trade until it has been examined and sealed by the state commissioner of weights and measures, or local sealer.

The CHAIRMAN. Why should the state commissioner have anything to do with sealing? He ought to inspect, but not seal weights and measures used in trade.

Mr. PETTIS. The attorney-general of Rhode Island has decided that the state sealer of weights and measures has the same rights and privileges as any town or city sealer.

The CHAIRMAN. It is not so in my State.

Mr. FISCHER. I thought you did have authority to inspect?

The CHAIRMAN. I have the power to make inspections; I have the right to enter any building to see that scales correspond with the standards; but that is all. If the apparatus does not conform to the

standards, I notify the mayor or board of selectmen and they cause the provisions of the law to be enforced; or I may prosecute for violations; but I do not attend to the details of sealing, such as are performed by a local sealer of weights and measures. The state commissioner should go around and supervise the local sealer's work, but he ought not to do sealing.

Mr. REICHMANN. An occasion might arise where he would want to do so, in some particular or special case.

The CHAIRMAN. How would a sealer of one of the cities of New York State feel if the state superintendent of weights and measures went into his city and began sealing weights and measures?

Mr. REICHMANN. Suppose a railroad company brings you a depot scale; would you test it?

The CHAIRMAN. Yes; but I test apparatus as a matter of convenience only.

Mr. FISCHER. I do not know whether this clause would lead to any trouble. I did not suppose that any state commissioner would want to do this work.

The CHAIRMAN. But you are making his seal legal.

Mr. FISCHER. It seems to me that if there is any dispute about a matter and an individual or a firm wanted to have its standards examined by a state commissioner he ought to do it.

The CHAIRMAN. That may be, but not so far as placing his seal on it.

Mr. PETTIS. If he tests and examines, he ought to place his seal on it.

Mr. WALL. Suppose you get information that a sealer is not performing his duties. How would you go about to investigate?

The CHAIRMAN. I go to his town or city and make an inspection. If I find he is not doing his work, I usually have a conversation with him. Under the law I am supposed to notify the chairman of the board of selectmen, and the law says they shall cause the law to be enforced.

Mr. WALL. Can you usually determine the question? Suppose he is evading the law; that he is in collusion with some of the people for whom he is making tests?

The CHAIRMAN. I go to the chairman of the board of selectmen or the mayor, who is the administrative officer, and make a formal complaint in writing that the law is being violated. Or, if there is a direct violation of the law, I can make a prosecution personally without consultation.

Mr. WALL. I was wondering how you went about getting the facts.

The CHAIRMAN. Upon complaint, or by personal inspections which I make from time to time. Part of my work consists in going around and making inspections of the standards. I may examine and test scales, weights, etc., of tradesmen precisely the same as a local inspector, but do not attempt to seal them. I look to see if they bear the seal mark. If they do not, I make complaint.

Mr. FISCHER. Inasmuch as the state sealer or commissioner has a better set of standards, I can readily conceive that there might be a number of cases where he would be called upon to seal weights and measures where the local sealer could not do so in a satisfactory manner, just as in the case of the Bureau here we expect to receive weights to standardize which can not be standardized with sufficient accuracy by the state commissioner or local inspectors. And I can see that a business house under certain circumstances might prefer the stamp and seal of the state commissioner.

Mr. REICHMANN. A case of that kind comes up in our knitting mills, where they would rather have the seal of the state officer, and also in the case of drug stores. Ordinarily local inspectors would not have to correct drug-store scales, but according to Massachusetts law they ought to do so.

The CHAIRMAN. I understand the position Mr. Fischer takes, and fully agree with him; but you are establishing a very bad precedent. Suppose, in the case of Mr. Reichmann, a New York merchant would send up to Albany 150 yardsticks to be adjusted by him. He could not refuse, under this broad clause, to seal them.

Mr. REICHMANN. Certainly; I could raise the point that it was not work precise enough to require the work of the state sealer, and that a city sealer was available to do the work.

The CHAIRMAN. I do not think your judgment would be law in this case. You are authorized to seal weights and measures when some one presents them to you for sealing. Your seal is accepted as the final seal on an article, without any regular or local inspection law. It is possible that the whole city of Albany might submit apparatus to you and the local sealer would not have any work to do. You must draw the line sharply between the responsibility and the acts of the state sealer and a local sealer.

Mr. REICHMANN. To my mind that is what it does. It does not say you are compelled to do it.

The CHAIRMAN. Why could you refuse to do it? There is a provision made by law for you to seal weights and measures.

Mr. REICHMANN. You could refuse to do it. You have the right to do so; the work is not required of you.

The CHAIRMAN. I do not believe the state commissioner of weights and measures should test weights in factories. I do not think that is a function of his office.

Mr. HASKELL. The whole trouble is with the fee system. Suppose a state sealer is disposed to work in conjunction with large manufacturing interests, and if a local office is established having to do with weights and measures and the manufacturers see fit to have their apparatus verified by the state sealer, who consents to do the work, where is your local sealer going to get any business?

The CHAIRMAN. What good is his objection going to do if the state sealer sees fit to seal the apparatus?

Mr. HILL. If this is put into effect at all, in a great number of the States, particularly in the West, it is going to be a matter of slow growth before it is ever put into effect in any such way as you have it in Massachusetts, New York, and Rhode Island. It is going to be a long while before a very large number of the towns in the State of Kansas have sealers who would be capable of making these delicate comparisons. As a matter of fact, most of that work which comes up is done at the University of Kansas. It is being concentrated there. Our professor of chemistry, who is state chemist and dean of the School of Pharmacy, has charge of the analysis of drugs, etc. We have to have some such provision for doing that work which the local sealers can not do, and have no provision for doing.

On motion, section 27 was adopted as read.

Section 28 was read by the secretary:

Sec. 28. All computing devices shall be tested as to the correctness of the values, and all values, whether in money, figures, or graduations, shall be correctly placed, so that when any commodity is weighed thereon the money value registered shall be the true value of the commodity weighed.

Mr. HILL. This is a matter in which I am not very deeply versed, but I think that it is a question that is up now in Massachusetts. As nearly as I have found out, it is a question not so much for arbitrary legislation as for consideration as a mathematical problem. Can a scale be made that will show the true value of the commodity weighed?

Mr. PETTIS. They can do it, but will not.

Mr. HILL. The matter of splitting cents depends on what this word means.

The CHAIRMAN. The attorney-general of Massachusetts says that no court must construe anything within the value of one-half cent,

because there is no monetary coin in the United States within the value of 1 cent.

Mr. FISCHER. There is no difficulty in placing, for example, the figures 15 exactly where they belong. If a commodity is selling at 35 cents and happens to come out at 15 cents, can we not place that 15 just where it belongs accurately computed, as accurately as it is possible to do mechanically?

Mr. HILL. The point I was making is whether this word "true" is not the particular word that is making trouble in the Massachusetts law now?

The CHAIRMAN. This is the word that is making the trouble; but we believe the true value can be placed.

Mr. FISCHER. At the present time the values are placed with reference to ounce graduations, and that is the thing we are attempting to obviate. Instead of placing them with reference to ounce marks, we want them placed exactly where they belong, shove them along the drum or let them come a little sooner, as the case may require.

Mr. PETTIS. On those scales you will see the values for the half ounce, the ounce, $1\frac{1}{2}$ ounces, and 2 ounces all shown as 4 cents.

Mr. FISCHER. In selling at 4 cents a pound, these scales show the figure "1" for 2 ounces.

Mr. HILL. I understand that. It would be a matter of using scales for what they were intended. You would hardly expect to sell drugs or jewels on meat scales. That is the only point.

Mr. FISCHER. Still the value can be correctly placed. They should show no figure until 4 ounces have been placed on the scale. Two ounces is not a cent's worth; it is only one-half cent's worth. Consequently, the scale ought not to show anything until there is a cent's worth on the scale, which can be done.

Mr. HILL. My understanding was that it was done within the nearest half cent.

Mr. FISCHER. It is placed now with reference to ounce graduations, and that has been the cause of endless trouble.

Mr. HILL. I am not saying that any one scale is correct. All I was contending for was provided it could be made on the principle claimed for it.

On motion, section 28 was adopted as read.

Section 29 was read by the secretary:

SEC. 29. Every weight, except when the small size of the weight renders it impracticable, shall have the denomination of such weight stamped on the top or side thereof in legible figures or letters; and every measure of capacity shall have the denomination thereof stamped on the outside of such measure in legible figures and letters.

A weight or measure not in conformity with this section shall not be stamped by the state commissioner of weights and measures or local sealer.

Mr. HAARER. Does that mean that the capacity would be blown on every milk bottle?

Mr. FISCHER. It would cost very little to do it, and I think it ought to be done. They simply make a mold and blow it in.

Mr. PETTIS. I am in favor of that.

On motion, section 29 was adopted as read.

The secretary read section 30:

SEC. 30. Every person who uses, or has in his possession for trade, any weight, measure, scale, balance, steelyard, or weighing machine which is false or unjust shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense fifty dollars, and any contract for gain, sale, or dealing made by the same shall be void, and the weight, measure, scale, balance, or steelyard shall be liable to be forfeited.

Mr. STAFFORD. I would like to know the meaning of the expression "for trade."

Mr. FISCHER. That carries the same meaning as we have been using before, buying and selling.

Mr. STAFFORD. To sell the scale?

Mr. FISCHER. No; to use it.

Mr. STAFFORD. Then, should it not read "for use in trade," so that the first part of the section would read, "Every person who uses or has in his possession, for use in trade," etc.?

Mr. FISCHER. I move to insert the words "use in" after "for," so that it will read that way.

Mr. STAFFORD. I believe we should leave out the question of knowledge, and make the man liable whether he knows or not.

The CHAIRMAN. Yes. You will have to prove intent. This section ought also to be broad enough to take in scales, just as we do in Massachusetts, to include traveling costs and labor to transport it. It seems to me that is important, and I would suggest that your legal adviser at the Department see that the points mentioned are covered.

Mr. FISCHER. To what scales have you reference?

The CHAIRMAN. Scales used for determining cost of labor in paper factories, wire factories, etc.

Mr. STAFFORD. I do not know that I understand the meaning of the word "trade" in this section.

Mr. FISCHER. The word "trade" is the word used in the English law. I judge they have considered that rather carefully, because they have very rigid laws.

Mr. STAFFORD. It is a very broad word.

Mr. FISCHER. So far as I know their law is very satisfactory. I think anything we can take from the present English law will be satisfactory so far as trade weights and measures are concerned.

Mr. STAFFORD. Does that include expressage?

The CHAIRMAN. Our attorney has construed that the cost of transportation was a commodity.

Mr. FISCHER. It certainly would be if it went by freight.

On motion, section 30 was adopted as amended, and reads as follows:

SEC. 30. Every person who uses, or has in his possession, for use in trade, any weight, measure, scale, balance, steelyard, or weighing machine which is false or unjust shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense fifty dollars, and any contract for gain, sale, or dealing made by the same shall be void, and the weight, measure, scale, balance, or steelyard shall be liable to be forfeited.

The secretary read section 31:

SEC. 31. A weight or measure duly stamped by an inspector shall be a legal weight or measure throughout the State, unless found to be false or unjust, and shall not be liable to be restamped because used in any other place than that in which it was originally stamped.

The CHAIRMAN. A change in the first line of that section should be made, because the state commissioner is liable to stamp apparatus. This section and section 27 should be made consistent.

It was agreed to substitute the words "the state commissioner or local sealer" for the words "an inspector."

Mr. THOMAS. I want to raise one question here which I thought of doing at an earlier period. I think we ought to provide for the recognition of the seal or certificate of the National Bureau of Standards under the state laws. I know that in certain lines of work—in surveying, for instance—the Bureau of Standards has made provision for the testing of surveyors' chains and tapes, a provision which is not easily met or easily carried out by local sealers, and I have known of cases where the question of the seal has come up. I think it would be wise for us throughout the country to recognize this, if not to advocate in certain cases the recognition locally of the certificate or results of tests made by the Bureau of Standards.

Mr. WALL. What would be the expense of testing a steel tape—I mean getting a certificate?

Mr. FISCHER. We charge 75 cents for the total length if it is not greater than a hundred feet, and 10 cents additional for any intermediate marks.

Mr. WOOLF. May I ask who gets that?

Mr. FISCHER. It goes to the National Government.

The CHAIRMAN. Right along with Mr. Thomas's suggestion, it seems that the National Bureau of Standards' mark or stamp has no distinctive mark as to the year. That would be a difficulty in providing for annual sealing of certain articles. It would be necessary for the Bureau of Standards to put on a date mark. One would not want to say that an article sealed by the Bureau of Standards would be good indefinitely. That question could be settled by leaving it to the Bureau of Standards.

The CHAIRMAN. I should think that a limitation should be fixed as to how long the accuracy of a test made by the Bureau of Standards should be recognized. A man might have a scale tested at the Bureau of Standards, then use it in Washington here, and Mr. Haskell would not have any jurisdiction over it, if you say the Bureau of Standards' mark shall be recognized.

Mr. FISCHER. It seems to me that will have to be recognized anyhow. Since we possess the fundamental standards, I do not see how anyone could go back of any certification we might make.

Mr. HASKELL. That is an act of Congress, is it not?

Mr. FISCHER. I do not think it is in our organic act. But our certificate is accepted and has been used in court a number of times, and I should think the state sealer's would be if he were competent; but as far as I know that question has never come up. Of course we do not want to do the work of inspecting trade weights and measures. A number of manufacturers have sent their standards here—people like Fairbanks—and they will no doubt continue to do so.

Mr. THOMAS. Is there any national legislation which will hold in the case of litigation in the State, making a test by the National Bureau of Standards a legal test, as to the correctness of the thing certified?

Mr. FISCHER. I do not think there is; but I would like to see that authority conferred on the Bureau.

Mr. THOMAS. It was my aim to accomplish this. I move as a further amendment to insert after the word "sealer" the words "or by the National Bureau of Standards."

Mr. FISCHER. That would make it a legal weight or measure throughout the United States. It seems to me we ought to have a separate paragraph about that, and perhaps it should go under the national law. I think that ought to be the way to take care of it.

The CHAIRMAN. Why could not the Solicitor, in drawing up this bill, include a separate clause providing that all articles sealed by the Bureau of Standards should be good so far as state inspection goes?

Mr. FISCHER. I think that ought to be done by act of Congress, under the proposed national law, say, after section 5.

Mr. THOMAS. That would not meet all the requirements. As a rule, people would not be informed as to national legislation on the subject; they would be guided by the state laws in regard to state litigation.

The CHAIRMAN. Suppose we have it understood, Mr. Fischer, that when you take up this matter with your legal adviser you suggest to him that he provide a clause to that effect.

Mr. FISCHER. Of course, that is what we want. The Bureau of Standards does not wish to test weights and measures. It is a great inconvenience to the people to send them here, and it certainly is unsatisfactory to us; we do not want it at all. But it seems to me that the large manufacturer who is doing business all over the country ought to be permitted to send his standards here; and there ought not to be any question about a set of standards after we certify to them.

The CHAIRMAN. Those standards do not come under the jurisdiction of the sealer. The manufacturer is simply using them, as a rule, for his own convenience or for standardizing other articles. What do you think about it, Mr. Thomas; do you want to insist?

Mr. THOMAS. I think it can go there. It can do no harm, and I believe it does good. It is important, as I look at the matter.

The CHAIRMAN. Of course, if this is incorporated in the sections to be adopted by the National Government, there would be no necessity for having it in the state law. National law would override anything put on the state statute books, and in that event state legislation would be superfluous. Mr. Fischer, as I understand it, will bear this in mind, and suggest that something of the kind be drawn up.

Mr. FISCHER. I would just as leave have this body take action, and insert it after section 5, if it will. If Mr. Thomas will frame his amendment that way, I would like to have it follow section 5.

Mr. HAARER. I agree with Mr. Thomas that this should be in the part referring to state laws, even though we should put it in the national law, for the reason that in case of litigation you would have the matter in state laws, and action could then be taken in local courts, and the case would not have to be commenced under the national law.

Mr. THOMAS. The point lies not in providing for the exhibition of authority and law by counsel in the course of a case actually in progress. It seems to me it would be better to have it in a place where one who is committing acts which may be subject to litigation can see before committing them how the law on the subject reads. It gives notice to the public that the stamp of the National Bureau of Standards is recognized in the state law. Able counsel prosecuting a case under such conditions will find in the national law provision for it; but the everyday citizen will not. He does not think about national law so much; he is concerned with state law.

Mr. HASKELL. What harm can it do?

Mr. THOMAS. I do not see that it can do any harm.

On motion, section 31, with amendments, was adopted and reads as follows:

SEC. 31. A weight or measure duly stamped by the state commissioner of weights and measures or a sealer, or by the National Bureau of Standards, shall be a legal weight or measure throughout the State, unless found to be false or unjust, and shall not be liable to be restamped because used in any other place than that in which it was originally stamped.

The secretary read section 32:

SEC. 32. Where any fraud is willfully committed in the using of any weight, measure, scale, balance, or steelyard, or weighing machine, the person committing such fraud, and every person party to the fraud, shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense fifty dollars.

Mr. PETTIS. Instead of saying "shall be liable," why not say "shall be fined?"

Mr. FISCHER. That is the common and accepted phraseology.

Mr. THOMAS. Is not that section covered by section 30?

The CHAIRMAN. No. One relates to false weights and measures in a person's possession; the other to fraud willfully committed. One might commit fraud with weights and measures which were entirely correct.

Mr. THOMAS. What is the evidence of fraud?

Mr. FISCHER. If one buys a pound of tea, and weighs it on correct scales and finds it weighs 14 ounces, that is evidence of fraud.

Mr. BENT. Not necessarily evidence of willful fraud in all cases.

Mr. HASKELL. I do not think the fine is heavy enough. If a man deliberately places something on his scale for the purpose of defrauding the public, it seems to me the fine in many cases ought to be \$50. In the District of Columbia the fine is not to exceed \$100, in the

discretion of the court. It may be \$5, \$10, or up to \$100. Very often we have cases where the court adjudges the limit of \$100, or six months in jail.

The CHAIRMAN. We have just passed a law which reads as follows:

Whoever shall be guilty of fraud and the giving of false weight and measure shall be for the first offense liable to a fine of not more than fifty dollars; for the second offense, not more than one hundred dollars; and for the third offense not more than fifty dollars and six months' imprisonment.

All laws read in that manner; not more than so much. It gives the judge the right to fine from \$1 up.

A MEMBER. You do not put a minimum?

The CHAIRMAN. No. Our State has practically abolished all such phraseology in the laws. I think there ought to be a term of imprisonment provided for the third offense.

Mr. FISCHER. It seems to me if we fine these people and publish their names and occupations, there never will be a third offense.

On motion, section 32 was adopted as read.

The secretary read section 33:

SEC. 33. All dealers in milk and cream who use glass bottles, jars, or other receptacles for the distribution of milk or cream to consumers shall bring in such bottles, jars, or other receptacles to the office of the sealer of weights and measures in their respective cities and towns, to be sealed as aforesaid; but no fee shall be charged or received for sealing them. If a bottle or jar has once been sealed by the sealer of weights and measures, it shall not in any case be necessary to have it sealed again at any time while it is used for the distribution of milk or cream to consumers. Glass bottles, jars, or other receptacles sealed under the provisions of this section shall not be legal measures except for the distribution of milk or cream to consumers.

Mr. HASKELL. We have tried it both ways here, and we have arrived at the conclusion that the best way is this: A measure must be a standard measure, and that being established, if a man uses a measure that is not a standard measure he is liable to prosecution. But when it comes to the question of sealing, as in our large cities, there are five or six hundred thousand bottles to be sealed, and the life of them is not long. I think it was claimed here in a hearing that the life of a bottle was only about twelve days. Now, if one has to go over that number of bottles, say, every sixty days, it would require a force of 25 to 50 men. Who is going to pay that expense when we receive no fees for it? What county, town, or city is going to provide for that?

Mr. YODER. Let each State.

Mr. FISCHER. We also have had that trouble at the Bureau. We have certain regulations in regard to glassware, etc. (apparatus for

chemists), and a great many chemists order according to particular specifications and direct that the apparatus be sent directly to the Bureau to be verified. Now, the result of this has been that a great many manufacturers do not inspect apparatus after it is finished. They send it down to us and let us pick out the good apparatus and stamp it, and send the imperfect back to them. It is a great deal of work for us. The way we are thinking of getting around them now is by charging them a certain amount for the apparatus examined. I believe if that is not done with regard to milk bottles, it will make the city sealer's office a sort of clearing house. He will have to pick out the good from the bad; and they will not make any inspection at all at the factory.

Mr. PETTIS. You pick out one lot that is bad and they will not send any more to you.

Mr. HASKELL. If I understand it rightly, you are merely making suggestions to the different States. This, as I understand it, provides that the bottles shall be delivered at the office of the sealer. Now, very often we have 5 carloads of bottles coming in here at a time, and the capacity of the sealer's office of the District of Columbia is such that we would have to put them in the street. I think it is necessary to get around that some way or other without sealing.

Mr. PETTIS. In Massachusetts, at offices where the sealers are paid salaries, there is no charge for testing bottles. In towns where sealers are paid by fees, when a man brings bottles to be sealed the sealer tests and seals them and the man signs a printed slip stating the number of bottles tested and sealed for him. The sealer takes the slip to the town council when it has a meeting and is paid for his work. I have been trying to get that plan adopted in Rhode Island.

The CHAIRMAN. What is the pleasure of the conference with regard to section 33?

Mr. PETTIS. I move that it be adopted.

The motion was agreed to and section 33 adopted as read.

The secretary read section 34:

SEC. 34. Every person who, in putting up in any bag, bale, box, barrel, or other package, any hops, cotton, wool, grain, hay, or other goods usually sold in bags, bales, boxes, barrels, or packages by weight or measure, puts in or conceals therein anything whatever, for the purpose of increasing the weight or measure of such bag, bale, box, barrel, or package, with intent thereby to sell the goods therein, or to enable another to sell the same, for an increased weight or measure, is punishable by fine of not less than twenty-five dollars for each offense.

The CHAIRMAN. We should strike out the word "usually" in the phrase "or other goods usually sold," etc.

Mr. HASKELL. Mr. Chairman, what is the meaning of the word "goods?"

The CHAIRMAN. Commodities, I think.

Mr. HASKELL. I would suggest we change the word "goods" to "commodities."

Mr. REICHMANN. Could not this section be worded in more general terms so as to embrace almost any commodity, such as spools of thread, berry boxes, etc.?

Mr. WELD. That is giving short weight or measure, is it not?

Mr. WOOLF. May I ask whether this would include the adding of water to a bale?

Mr. FISCHER. That is what it is intended to do, of course; but whether it does or not, I am not sure. The phrase "puts in or conceals therein for the purpose of increasing the weight," would seem to cover the point in question.

Mr. WOOLF. I move the adoption of section 34.

The motion was agreed to, and section 34 was adopted with the suggested amendments to strike out the word "usually" and substitute the word "commodity" for the word "goods." The section now reads:

SEC. 34. Every person who, in putting up in any bag, bale, box, barrel, or other package, any hops, cotton, wool, grain, hay, or other commodity sold in bags, bales, boxes, barrels, or packages by weight or measure, puts in or conceals therein anything whatever, for the purpose of increasing the weight or measure of such bag, bale, box, barrel, or package, with intent thereby to sell the commodity therein, or to enable another to sell the same, for an increased weight or measure, is punishable by fine of not less than twenty-five dollars for each offense.

The CHAIRMAN. Was there not something we desired to take up at this point?

Mr. FISCHER. Mr. Haskell brought up the question of bushels.

Mr. HASKELL. I move that the question of uniformity of bushels of various articles be referred to the executive committee, to take up the subject in general, and make a report at the next meeting.

The motion was agreed to.

Mr. HASKELL. I move that in the suggestions for laws that we have been considering that wherever the word "States" is used there be added the words "Territories and the District of Columbia," so as to cover the whole country.

The motion was agreed to.

Mr. PETTIS. Mr. Stafford, of Vermont, is here, and as he has not yet addressed the conference, I move that he be asked to do so.

The CHAIRMAN. We would be very glad to hear from Mr. Stafford.

Mr. STAFFORD. This is a matter I do not know anything about. I came here on the suggestion of Mr. Hazen, who has met with you in former years, but who could not come at this time. He said that some matters of legislation were to come up for discussion and possibly I might be able to help a little on those lines, and that is why I came to-day. I have listened with a great deal of interest to what has been said here, but I have no suggestions to make.

Mr. PETTIS. What we would like to hear is something in regard to the condition of affairs in your State.

Mr. STAFFORD. I do not know how they stand with reference to this matter. While I was on the bench at home I do not think I ever had a case of false weights or measures, or anything which you are providing for here.

Mr. REICHMANN. I would like to make a motion to the effect that an article be added to the state regulations, in speaking of the duties of the state officer of weights and measures, that he be made a prosecuting officer as well as a local officer. I do not think that is embodied here, but we can leave it to Mr. Fischer to put it in.

The CHAIRMAN. It is moved and seconded that it is the sense of this meeting that the state officer be made a prosecuting officer as well as state commissioner, so called in this bill, and that Mr. Fischer be instructed to bring this to the attention of the legal officer having it in charge.

The motion was agreed to.

Mr. REICHMANN. I move that the executive committee be asked to draw up a resolution to present to the proper committee of Congress that it is the sense of this organization that the net weight or capacity of the goods should be stamped on all packages sold in the United States.

The motion was agreed to.

Mr. BENT. I move that it is the sense of this association that the compensation to all officers in the discharge of their duties in connection with weights and measures be by salary, and we recommend that the fee system be abolished.

Mr. WELD. That is fees to the officers?

Mr. BENT. Yes; fees to the officers. They to be paid by salary, and any fees collected to be turned over to the municipality or county.

The motion was agreed to.

The CHAIRMAN. If there is no objection, we will now proceed with the election of officers. I find the secretary is provided for, but not the chairman.

Mr. PETTIS. I nominate Dr. S. W. Stratton, Director of the Bureau of Standards.

On motion the nominations were closed and Doctor Stratton was elected chairman by acclamation.

Mr. FISCHER. Mr. Chairman, I think we ought to have a vice-chairman as well, for just such an emergency as arose this year. If it is in order, I would like to nominate Mr. Palmer, of Massachusetts.

On motion the nominations were closed, and Mr. Palmer was elected vice-chairman by acclamation.

The CHAIRMAN. As the secretary is provided for, that completes the officers. Is there not a vacancy on the executive committee to be filled?

Mr. FISCHER. Mr. Hazen, who is not here this year, is a member of the executive committee, and he may consent to act. This matter can be taken care of by the permanent chairman on his return.

Mr. REICHMANN. I am sure that every delegate who is here is very thankful to the members of the Bureau of Standards for the way they have entertained us. We have been very much interested in this organization, and this year we have accomplished a good deal more than ever before, which would have been impossible had it not been for the Bureau of Standards bringing us together. We want especially to thank Mr. Fischer for the enormous amount of work which has fallen on his shoulders in bringing us together.

I move that a vote of thanks be extended to the Bureau of Standards, and Mr. Fischer in particular, for our entertainment.

The CHAIRMAN. It is moved and seconded that this association pass a vote of thanks to the officers and attachés of the Bureau of Standards, especially to Mr. Fischer, for the splendid way in which we have been entertained. We will take a rising vote.

The motion was unanimously agreed to.

Mr. BENT. I move that the executive committee be instructed to draw up and present to Secretary Straus (through its secretary) a resolution thanking him for his interest and cooperation in this matter, and his reception.

The motion was agreed to.

Mr. BECK. I move that a vote of thanks be extended to the chairman for courtesies extended during the meeting.

The motion was adopted by a rising vote.

Mr. FISCHER. I would like to say just a word: So far as being under any obligation to the Bureau of Standards, it seems to me the Bureau

is under obligations to the gentlemen who have come here to represent the different States. The only way we can get any information as to what is going on in the different States at the present time is by getting delegates to come here and tell us about it. I do not see how we could accomplish anything without their aid, and it seems to me instead of being under any obligations to us, we here are under obligations to you for coming. I am sure we are glad to have you come, and glad of the opportunity to entertain you at any time. So far as the Bureau is concerned, it is open to your inspection now or at any time you may happen to be in Washington.

Mr. HASKELL. I move we adjourn.

Mr. REICHMANN. I second the motion.

The motion was carried, and accordingly, at 4.10 p. m., the conference adjourned.

SUGGESTIONS FOR NATIONAL AND STATE LAWS ADOPTED BY THE NATIONAL CONFERENCE ON WEIGHTS AND MEASURES AT THE THIRD ANNUAL CONFERENCE, MAY 16-17, 1907.

NATIONAL LAW.

The Secretary of Commerce and Labor is authorized to furnish a complete set of standard weights and measures, adopted or accepted by the National Bureau of Standards, to any State, Territory, and the District of Columbia, under the following conditions:

SEC. 1. That the office of state commissioner of weights and measures be established.

SEC. 2. That facilities such as suitable quarters and equipment be provided for the state commissioner of weights and measures at the expense of the State or Territory.

SEC. 3. That the state commissioner of weights and measures be required to make an annual report to the governor, a copy of which shall be filed with the National Bureau of Standards, giving, in addition to other information, the number of weights, measures, and balances tested, sealed, or condemned by him, together with an inventory of the standards and apparatus in his possession.

SEC. 4. No weighing or measuring device shall be used for the purpose of trade until the type has been approved by the National Bureau of Standards. Any type so approved may be used anywhere in the United States: *Provided*, That nothing in this act shall prevent the state commissioner of weights and measures or local inspector from condemning such device if its operation should be defective.

Monthly bulletins giving a description of any weighing or measuring device approved by the National Bureau of Standards shall be sent to the state officer of weights and measures of each State.

SEC. 5. Model regulations for the guidance of state commissioners of weights and measures and local inspectors shall be prepared by the National Bureau of Standards in cooperation with the National Association of State Commissioners.

SEC. 6. The model regulations, prepared and issued by the National Bureau of Standards, shall govern the procedure to be followed by the state commissioner of weights and measures and local inspectors in inspecting, testing, and sealing all weights, measures, balances, or measuring devices.

SEC. 7. The net quantity of the contents of all packages shall be plainly stated in terms of weight or measure on the outside of the package.

LOCAL LAW.

SEC. 8. The weights, measures, and balances received from the United States under a resolution of Congress, approved June 14, 1836, and such new weights, measures, and balances as shall be received from the United States as standard weights, measures, and balances in addition thereto or in renewal thereof, shall be the authorized standards by which all county and municipal standards of weights and measures shall be tried, proved, and sealed.

SEC. 9. There shall be a state commissioner of weights and measures to be appointed by the governor, in such manner and at such salary as may be fixed by the respective state legislatures; and deputy commissioners may be appointed as required.

SEC. 10. The state commissioner of weights and measures shall have the exclusive custody and control of the state standards received from the National Government, which shall be kept in a fireproof room provided by the State, when not in actual use. He shall maintain the state standards in good order, and submit them once in ten years to the National Bureau of Standards for inspection.

SEC. 11. The state commissioner of weights and measures shall keep a complete record of standards, balances, and other apparatus in his possession, and take a receipt for the same from his successor in office.

SEC. 12. The state commissioner of weights and measures shall be sworn, and shall give bond to the State for five thousand dollars, conditioned on the faithful discharge of his duties.

SEC. 13. The state commissioner of weights and measures or deputy commissioner shall inspect all standards used by the county and municipal inspectors at least once in five years, and shall keep a record of same, and see that they are kept in proper adjustment with the state standards. He shall visit the various cities and towns of the State in order to inspect the work of the local sealers, and in the performance of his duty he may inspect the weights, measures, and balances of any person (or corporation) which are used for buying or selling goods, merchandise, or other commodities, and for public weighing.

SEC. 14. Every county and municipality in the State shall appoint a sealer, with a sufficient number of deputies to inspect at least once a year every weight, measure, balance, or measuring device of any kind used in trade within the jurisdiction of said county or municipality.

SEC. 15. Any two or more local authorities may combine the whole or any part of their districts upon such terms and in such manner as may be agreed upon.

SEC. 16. An inspector appointed in pursuance of an agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

SEC. 17. Every county and municipality shall provide the local sealer with suitable standards, apparatus, and quarters to enable him to properly perform his duties, all of which shall be subject to the approval of the state commissioner of weights and measures.

SEC. 18. It shall be the duty of the sealer to faithfully devote his time to the performance of the duties of his office, and to test all weights, measures, scales, beams, and steelyards used in trade, or other machinery used for weighing or measuring, within his district, at least once in every year; and upon being notified in writing by any person that any weight, measure, scale, beam, or steelyard used in trade, or other machinery for weighing or measuring any article intended to be purchased or sold in such district, is inaccurate, or believed to be so, or not according to the standard, to at once make an examination of the same.

And in the exercise of such duties he shall have full police power to enforce any and all reasonable measures for testing such weights and measures, and also in ascertaining whether false or short weights and measures are being given in any sales or transfer of articles of merchandise taking place within such district.

SEC. 19. Every local sealer shall make an annual report of the weights, measures, and balances tested by him, together with an inventory of the standards and working apparatus, to the state commissioner of weights and measures.

SEC. 20. All weights, measures, and balances which can not be made to conform to the standards shall be destroyed by the sealer.

SEC. 21. The local sealer shall report monthly to the state commissioner of weights and measures the names and occupations of all persons convicted for the use of fraudulent weights, measures, balances, or measuring devices, who shall publish the same in a daily paper of general circulation throughout the State.

SEC. 22. Any person who neglects or refuses to produce for said sealer all weights, measures, or balances in his possession, and used in trade, or on his premises, or refuses to permit the sealer to examine the same, or obstructs the entry of the sealer, or otherwise obstructs or hinders a sealer under this law, shall be liable to a fine not exceeding twenty-five dollars, and in a second offense of fifty dollars.

SEC. 23. A local standard which has become defective in consequence of any wear or accident, or has been repaired, shall not be legal, nor be used by the local sealer until it has been reverified by the state commissioner of weights and measures.

SEC. 24. Any sealer or deputy sealer of weights and measures shall forthwith, on his appointment, give bond in the sum of one thousand dollars for the due performance of the duties of his office, and for the safety of the local standards and the stamp appliances for verification committed to his charge, and for the surrender immediately on his removal or cessation from office to the person appointed by the proper authority to receive them.

SEC. 25. If a sealer or deputy sealer stamps a weight or measure without duly verifying the same by comparison with a local standard, or is guilty of a breach of any duty imposed upon him by law, or otherwise misconducts himself in the execution of his office, he shall be liable to removal or to pay a fine not exceeding two hundred dollars for each offense.

SEC. 26. A local standard shall not be deemed legal nor be used by the local sealer for testing any weight, measure, or balance unless it has been verified by the state commissioner of weights and measures within at least five years of the time at which it is used, or whenever necessary.

GENERAL REGULATIONS.

SEC. 27. No weight, measure, balance, or measuring device of any kind shall be used in trade until it has been examined and sealed by the state commissioner of weights and measures or local sealer.

SEC. 28. All computing devices shall be tested as to the correctness of the values, and all values, whether in money, figures, or graduations, shall be correctly placed, so that when any commodity is weighed thereon the money value registered shall be the true value of the commodity weighed.

SEC. 29. Every weight, except when the small size of the weight renders it impracticable, shall have the denomination of such weight stamped on the top or side thereof in legible figures or letters; and every measure of capacity shall have the denomination thereof stamped on the outside of such measures in legible figures and letters.

A weight or measure not in conformity with this section shall not be stamped by the state commissioner of weights and measures or local sealer.

SEC. 30. Every person who uses or has in his possession for use in trade any weight, measure, scale, balance, steelyard, or weighing machine which is false or unjust

shall be liable to a fine not exceeding twenty-five dollars, or in the case of a second offense, fifty dollars, and any contract for gain, sale, or dealing made by the same shall be void, and the weight, measure, scale, balance, or steelyard shall be liable to be forfeited.

SEC. 31. A weight or measure duly stamped by the state commissioner of weights and measures or a sealer, or by the National Bureau of Standards, shall be a legal weight or measure throughout the State, unless found to be false or unjust, and shall not be liable to be restamped because used in any other place than that in which it was originally stamped.

SEC. 32. Where any fraud is willfully committed in the using of any weight, measure, scale, balance, or steelyard, or weighing machine, the person committing such fraud, and every person party to the fraud, shall be liable to a fine not exceeding twenty-five dollars, or in case of a second offense fifty dollars.

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DEPARTMENT OF COMMERCE AND CUSTOMS
BUREAU OF STANDARDS
NEW YORK OFFICE

Weights and Measures

FOURTH ANNUAL CONFERENCE
ON THE UNIFICATION OF THE
WEIGHTS AND MEASURES OF THE
UNITED STATES OF AMERICA



BY THE BUREAU OF STANDARDS
WASHINGTON, D. C.



DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
S. W. STRATTON ✧ DIRECTOR

Weights and Measures



FOURTH ANNUAL CONFERENCE
OF REPRESENTATIVES FROM VARIOUS STATES
HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C., DECEMBER 17 AND 18, 1908



GOVERNMENT PRINTING OFFICE
WASHINGTON ✧ ✧ ✧ 1910

LIST OF DELEGATES WHO ATTENDED THE CONFERENCE.



H. FOSTER BAIN,
Urbana, Ill.

ALFRED E. BENT,
State Treasurer,
Denver, Colo.

EDWARD E. BROWN,
University of Kansas,
Lawrence, Kans.

WESTON BRUNER,
Washington, D. C.
Representing

Hon. B. S. Bruner,
Secretary of State,
Frankfort, Ky.

HARRINGTON CLANAHAN,
Chief Clerk to Secretary of State,
Springfield, Ill.

L. A. FISCHER,
*Chief of Division of Weights and Measures,
National Bureau of Standards,*
Washington, D. C.

WILLIAM C. HASKELL,
*Sealer of Weights and Measures of the
District of Columbia,*
Washington, D. C.

P. F. HAZEN,
St. Johnsbury, Vt.

D. C. PALMER,
Commissioner of Weights and Measures,
Boston, Mass.

GEORGE H. PETTIS,
State Sealer of Weights and Measures,
Providence, R. I.

F. REICHMANN,
State Superintendent of Weights and Measures,
Albany, N. Y.

S. W. STRATTON,
Director National Bureau of Standards,
Washington, D. C.

B. F. THOMAS,
*Professor of Physics, Ohio State University,
and State Sealer of Weights and Measures.*
Columbus, Ohio.

J. SUTTON WALL,
Chief Draftsman, Department of Internal Affairs,
Harrisburg, Pa.

LAENAS G. WELD,
State Superintendent of Weights and Measures,
Iowa City, Iowa.

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REPORT OF THE FOURTH CONFERENCE OF WEIGHTS AND MEASURES

HELD AT THE BUREAU OF STANDARDS
WASHINGTON, DECEMBER 17 AND 18, 1908



FIRST SESSION (MORNING OF THURSDAY, DECEMBER 17, 1908).

The meeting was called to order at 11.30 o'clock a. m. by the chairman, Dr. S. W. Stratton, Director of the Bureau of Standards.

The CHAIRMAN. Gentlemen, we have heard from the delegates of several more States, who are in the city and will be here later.

I had hoped to present to you this morning the Assistant Secretary of Commerce and Labor; in fact, the Secretary had promised to come out, but he was called away the day before yesterday. The Assistant Secretary said he would come out and be with us most of the day, but this morning a Senate committee sent for him and he is to appear before that committee. However, it is expected he will be here to-morrow.

We are always glad to see our friends at the Bureau, and we count the members of this organization our best friends in all matters relating to weights and measures. One of the principal objects of the Bureau in encouraging this organization is to secure from its members the information which can be obtained only from men closely in touch with the everyday affairs pertaining to weights and measures. We want the Bureau to be of as much assistance as possible to the public in matters pertaining to weights and measures, and this can be accomplished only through efficient state organizations. It works both ways, at it were. We have a great deal to learn; and on the other hand, there are a great many ways in which we can assist the States. We have made a very great effort this time to get representatives from most of the States, and I am somewhat disappointed that we have not more. There is one thing to be said, however, and that is that when a State once takes this subject up, when it once gets a man who is really interested in weights and measures and who organizes the work in the State, there is never any going backward. We find here this morning the men who have been coming right along. We are going to try to help you a little more effectively this year.

We have asked Congress for an appropriation, small in itself, but large enough to enable us to accomplish something. The object of this appropriation is to enable the Bureau to send representatives into the various States to make an investigation. We have two objects in view—one is to find out what the States are doing with the standards that were furnished them by the General Government, and the other is to secure certain information that we desire, much of it the sort of information that we will eventually get through this organization when all the States are represented. This appropriation has been favorably passed upon by the House, and I think we have every reason to believe that it will be allowed by the Senate.

There is another point that I wish to mention, and that is the broadening of the functions of the state officials; in other words, I want a little broader and more general definition of the term “weights and measures,” and I think the time will come eventually when the States will feel it just as important to handle affairs pertaining to gas meters, water meters, electric meters, and even thermometers, as they do the ordinary weights and measures. We find attempts at supervision over these instruments in a great many States. We find separate commissions and separate inspections. But there is no attempt to centralize the work. That is what ought to be done, because all of it is weights and measures. In some States the question of inspection is overdone. There is a tendency to create separate offices with separate officials where one man could attend to all the work. To my mind, there is but one really good and efficient way in which to handle the question, and that is to have all matters pertaining to weights and measures, the testing of all apparatus used in measuring commodities sold to the public, under one head, thus broadening the term “weights and measures,” as is done here at the Bureau.

“Weights and measures” at the Bureau means electric measurements, heat measurements, light measurements, and all other kinds of measurements. The Bureau is making scientific investigations regarding these things, and promoting and developing methods of measurements, and doing other work useful to the state officials. The city officials and state officials concerned should bring the necessity of inspection to the attention of the public. There is no reason for separating these various kinds of inspection, and I think the work can be best done by having it centralized and under people who are trained along the lines to make them fitted for that work. What is the use of an inspector of gas meters, an inspector of electric meters, and all those other inspectors, if they are merely political appointees? The tendency everywhere is to create new positions. But it should all be put under one head, in the manner of a scientific institution,

politics being left out. I may be looking somewhat into the future, but that is what I think is going to come in the end.

I want to say again that we are very glad to see you this morning. We look forward to these meetings with pleasure, and we hope that next year you will help us to get some additional States to send delegates.

The first business on the programme is the roll call.

The secretary called the roll, the following-named delegates being present:

Mr. BAIN, Illinois.
Mr. BENT, Colorado.
Mr. BROWN, Kansas.
Mr. BRUNER, Kentucky.
Mr. CLANAHAN, Illinois.
Mr. FISCHER, Washington, D. C.
Mr. HASKELL, District of Columbia.
Mr. HAZEN, Vermont.
Mr. PALMER, Massachusetts.
Mr. PETTIS, Rhode Island.
Mr. REICHMANN, New York.
Mr. STRATTON, Washington, D. C.
Mr. THOMAS, Ohio.
Mr. WALL, Pennsylvania.
Mr. WELD, Iowa.

The SECRETARY. In addition to the gentlemen present, we were notified by the governor of Georgia that Hon. Philip Cook, secretary of state, who represented that State last year, would be present. We were also informed that Maryland would again be represented by Mr. Woolf, of Baltimore. The governor of Alabama was under the impression that we asked for "delegates," and appointed a number; but I do not see any of them present. Mr. Haarer, who was with us last year, was appointed to represent Michigan, but he notified us a few days ago that he would be detained on account of a trial in which he was a witness. We have also been notified by the governor of Utah that Hon. O. J. Salisbury has been appointed to represent that State. Mr. Richardson was appointed to represent Virginia, but we received a message from him to-day stating that he would be unable to attend.

All of the governors of the States expressed themselves as greatly interested in this matter, and in almost every instance where a delegate was not appointed it was on the ground that there was no appropriation from which the expenses of such a person could be defrayed.

The CHAIRMAN. I think the question of expenses has a great deal to do with it. There are few States that have made provision for the expenses. It will take them some time to get around to that.

The SECRETARY. I might also report that a delegate was appointed from Maine, but he declined to come because there was no fund from which his expenses could be paid.

The CHAIRMAN. How about New Jersey?

The SECRETARY. We have heard nothing from New Jersey; that is, nothing favorable.

The CHAIRMAN. Both New Jersey and Connecticut have sealers' organizations and should be represented here. The next order of business is the report of the executive committee.

The SECRETARY. During the year we obtained from the Solicitor of the Department an opinion, which had to be approved by the Attorney-General before it could be published. It is an opinion as to whether Congress could lawfully require all weights and measures to bear a prescribed stamp and provide penalties in case weights and measures other than those bearing the stamp and conforming to the standard were used. I will read the opinion, which is as follows:

SIR: My opinion is requested, by your reference of a letter from the Bureau of Standards, as to whether, under the fifth clause, section 8, Article I, of the Constitution, Congress may enact a law which shall define the standard of weights and measures to be used throughout the several States and Territories of the United States, require all such weights and measures to bear a prescribed stamp, and make it a misdemeanor to use in trade any weights or measures departing from such standard or without such stamp.

I have the honor to answer this question in the affirmative on the following grounds:

In enumerating the powers granted to Congress the Constitution provides (sec. 8, Art. I):

"The Congress *shall have power* * * * To coin Money, regulate the Value thereof, and of foreign Coin, and *fix the Standard of Weights and Measures.*"

The proceedings of the constitutional convention, as recorded, add nothing to the simple words of this grant, as brief as they are comprehensive and as clear as they are precise. In the earlier drafts of the Constitution no mention was made of weights and measures. The clause, precisely as it now appears, though standing alone, was first introduced in the draft reported by the committee on detail August 6, 1787; and it was adopted by the convention August 16, 1787, without debate. It was combined with the clause granting the power to coin money and regulate the value thereof in the draft reported by the committee on style and arrangement September 12, 1787 (3 Doc. Hist. Const., 449, 545, 724; 8 Fed. Stat. An., 152). In the *Federalist* the power in question is noticed only by Madison, who says merely:

"The regulation of weights and measures is transferred from the Articles of Confederation, and is founded on like considerations with the preceding power of regulating coin." (*Federalist*, No. 42.)

Referring to the Articles of Confederation, it is found that the power was there granted in the following terms (Art. IX):

"The United States, in Congress assembled, shall also have the sole and exclusive right and power of * * * fixing the standard of weights and measures throughout the United States."

The power to fix the standard of weights and measures having been granted to Congress without limitation, and the clause containing the grant having been "transferred" from the Articles of Confederation, where it was exclusive in terms, the view has been taken that it remains, now as formerly, a power exclusively vested in Congress; and it has been regarded as "doubtful whether the enactments of any State on the subject are of any validity whatever, even though Congress have wholly neglected to attend to this regulation." (The *Miantonomi*, 17 Fed. Cas., 9521.) This view, however, is not accepted either by the state courts or by general writers on the Constitution. (See *Weaver v. Fegely*, 29 Pa. St., 30; *Caldwell v. Dawson*, 4 Met. Ky., 123; *Harris v. Rutledge*, 19 Ia., 390; *Higgins v. Petroleum Co.*, 109 Cal., 310; and see remarks of Justice Woodbury in the *Passenger Cases*, 7 How., 282, 562; but see *Thompson v. District of Columbia*, 21 Ap. Cas. D. C., 395, 402, where the court intimated that this grant to Congress "effectually prevented the several States from fixing standards that might vary and hence prove a hindrance to trade and interchange of commodities.") The view more widely held is that the power in regard to weights and measures is exclusive in Congress only when it is exercised, and that, pending such exercise, the several States may fix their own standards, or, at least, enforce existing standards. This is the position taken, not only in the cases last cited, but by such commentators as Story, Pomeroy, Burgess, and Cooley, as shown by the following extracts:

"The other power, 'to fix the standard of weights and measures,' was, doubtless, given from like motives of public policy, for the sake of uniformity and the convenience of commerce. Hitherto, however, it has remained a dormant power, from the many difficulties attendant upon the subject, although it has repeatedly been brought to the attention of Congress in most elaborate reports. Until Congress shall fix the standard the understanding seems to be that the States possess the power to fix their own weights and measures; or, at least, the existing standards at the adoption of the Constitution remain in full force." (2 Story, Const., sec. 1122.)

"The power to fix the standard of weights and measures was left in the hands of the States as well as of the General Government. As long as this power remains dormant in the National Legislature, the local Commonwealths may fully exercise it. Although the standard of weights and measures is connected with the general subject of the trade, business, and commerce of the country, and although uniformity in this standard throughout the Union is demanded by considerations of expediency, yet it is evident that such a uniformity is by no means as essential as a common standard of coined money. Without the latter business would be interrupted and in great measure destroyed; without the former, some inconveniences have been and are felt. * * * Should the National Legislature, however, change its policy and fix a standard for the whole country, all inconsistent state legislation would be a nullity." (Pomeroy, Const., sec. 410.)

"This can not be claimed as an exclusive power of the Legislature of the General Government as against the Commonwealths. Congress may occupy the ground whenever it sees fit, and the acts of Congress will displace the acts of the Commonwealths upon this subject; but until Congress acts, the Commonwealths may regulate the system of weights and measures." (2 Burgess, Pol. Sci. and Const. L., 141.)

"When this power is exercised, it is exclusive, or there would be no 'standard.'" (Cooley, Prin. Const. L., 85.)

Where, however, as in this case, a power is vested in Congress, which is neither made exclusive by the terms of the grant nor expressly prohibited to

the States, the true test of determining whether or not it is exclusive was long ago laid down by Chief Justice Marshall in *Sturgis v. Crowinshield* (4 Wheat., 122, 196, 193) in considering the power to establish uniform laws on the subject of bankruptcies throughout the United States. "The power granted to Congress," it was observed, "may be exercised or declined, as the wisdom of that body shall decide. If, in the opinion of Congress, uniform laws concerning bankruptcies ought not to be established, it does not follow that partial laws may not exist or that state legislation on the subject must cease. It is not the mere existence of the power, but its exercise which is incompatible with the exercise of the same power by the States. It is not the right to establish these uniform laws, but their actual establishment, which is inconsistent with the partial acts of the States. * * * The principle laid down by counsel for the plaintiff, in this respect, is undoubtedly correct. Whenever the terms in which a power is granted to Congress, or the *nature of the power*, requires that it should be exercised exclusively by Congress, the subject is as completely taken from the state legislatures as if they had been expressly forbidden to act on it." As already pointed out, the power to fix the standard of weights and measures, by the weight of opinion, is not in its "nature" one which "requires" that it should be exercised exclusively by Congress.

But it is not necessary that the power should be exclusive in order that Congress may deal with the subject in the manner suggested by the present inquiry. All the authorities are agreed that the power of Congress with regard to the standard weights and measures is plenary and complete; that it is only while it lies dormant that the States may act; and that, once it is exercised, state laws are displaced, and, so far as inconsistent, nullified. It is clear, therefore, that Congress has ample power to enact a law which shall fix the standard of weights and measures to be used throughout the several States and Territories of the United States, and require all such weights and measures to bear a prescribed stamp.

And it is no less clear that Congress may make it a misdemeanor to use in trade any weights or measures departing from the standard fixed, or without the stamp prescribed. "Whenever Congress may adopt any particular measure, may require anything to be done, or anything to be foreborne, in carrying out the specific grants of the Constitution, it may declare acts of disobedience, or acts which tend to interrupt the accomplishment of the proposed design, to be crimes, and may affix such punishments as it deems proper." This principle is not only sustained by the uninterrupted practice of Congress in the passage of innumerable statutes providing for the definition and punishment of crimes, but it has received the explicit sanction of the Supreme Court. In *United States v. Marigold* (9 How., 559, 566) the question was as to the validity of a statute which made it a crime to utter or circulate spurious or counterfeited coin. The decision sustained the validity of the law, although there was no express constitutional authority to enact it, on the ground that such a law was one of the necessary and proper means for carrying out the power "to coin Money, regulate the Value thereof, and of foreign Coin."

"The power to coin money being thus given to Congress, founded on public necessity, it must carry with it the correlative power of protecting the creature and object of that power. * * * We admit that the clause of the Constitution authorizing Congress to provide for the punishment of counterfeiting the securities and current coin of the United States does not embrace within its language the offense of uttering or circulating spurious or counterfeited coin (the term counterfeited, both by its etymology and common intentment, signifying the fabrication of a false image or representation); nor do we think it necessary or regular to seek the foundation of the offense of circulating spurious

coin, or for the origin of the right to punish that offense, either in the section of the statute before quoted, or in this clause of the Constitution. We trace both the offense and the authority to punish it to the power given by the Constitution to coin money, and to the correspondent and necessary power and obligation to protect and to preserve in its purity this constitutional currency for the benefit of the nation. While we hold it a sound maxim that no powers should be conceded to the Federal Government which can not be regularly and legitimately found in the charter of its creation, we acknowledge equally the obligation to withhold from it no power or attribute which, by the same charter, has been declared necessary to the execution of expressly granted powers, and to the fulfilment of clear and well-defined duties." (9 How., 559, 567, 568.)

In the *Legal Tender Cases* (12 Wall., 457, 535) it was said:

"Congress is expressly authorized 'to provide for the Punishment of counterfeiting the Securities and current Coin of the United States,' and 'to define and punish Piracies and Felonies committed on the high Seas, and Offences against the Law of Nations.' It is also empowered to declare the punishment of treason, and provision is made for impeachments. This is the extent of power to punish crime expressly conferred. It might be argued that the expression of these limited powers implies an exclusion of all other subjects of criminal legislation. * * * Yet Congress, by the act of April 30, 1790, entitled 'An act more effectually to provide for the punishment of certain crimes against the United States,' and the supplementary act of March 3, 1825, defined and provided for the punishment of a large class of crimes other than those mentioned in the Constitution, and some of the punishments prescribed are manifestly not in aid of any single substantive power. No one doubts that this was rightfully done, and the power thus exercised has been affirmed by this court in *United States v. Marigold*."

Respectfully submitted.

CHARLES EARL, *Solicitor*.

The SECRETARY. That opinion is a most important one, as you will understand.

I might also report that during the year the Bureau was represented at the organization of the local sealers in New Jersey and Connecticut. We had expected to have a representative from both those States, if for no other reason than that the sealers had organized. That is a very important step and one that is bound to stir up interest in those States.

Mr. PETTIS. What reason did Connecticut and New Jersey give for not sending representatives?

The SECRETARY. The governor of Connecticut reported that they had no fund for that purpose. New Jersey gave no reason whatever.

Mr. PETTIS. I certainly expected after the enthusiastic meeting we held at Newark that we would have a representative here from New Jersey.

The SECRETARY. I might mention one other thing, and that is the *Journal of Weights and Measures*. This is not to be considered as a part of the report of the executive committee, but merely my own opinion. It seems to me that this is a very important matter for all of us. This journal is a publication that all of us can make use of, and it will have a great tendency to bring us closer to one another.

Everything that has appeared in the two numbers so far published is certainly very valuable and I hope that nothing will interfere with its continued publication.

The CHAIRMAN. You have heard the report of the executive committee. What shall be done with it?

Mr. PALMER. I move that it be accepted.

The motion was seconded and the report accepted.

The CHAIRMAN. The next business is the report of the subcommittees appointed.

The SECRETARY. Doctor Reichmann and Mr. Palmer are on both of these committees.

Mr. REICHMANN. The subcommittee that was appointed by the executive committee consisted of Mr. Palmer and myself, and was appointed to get an expression of opinion from the commercial organizations that are affected by weights and measures—that means every commercial organization, for all are interested in weights and measures, whether they are associations of leather or hardware dealers, or of packers; they are all affected. The committee sent out a circular letter in rather general terms, asking them to indorse honest weights and measures legislation. All replies received were favorable. A number of the organizations do not have their regular annual meeting until some time later in the year. In many such cases the executive committee acted and indorsed the necessity of federal legislation. Some of the organizations have taken a very deep interest in the matter, such as the Commission Merchants' Association, the Chamber of Commerce of the City of New York, and the National Chamber of Commerce, and have sent printed resolutions to the Bureau of Standards and to the Committee on Coinage, Weights, and Measures in Congress. We have received about 175 favorable replies and no unfavorable ones.

The committee also sent out a circular letter to all the state officials in charge of weights and measures, calling attention to the importance of this conference and of legislation in respect to weights and measures. We received, I think, only two or three replies.

The executive committee, as well as the subcommittee, was very much impressed with the fact that it was necessary to get the co-operation of the commercial organizations affected, and so far as we have gone there is ample justification for the belief that they will take interest in it and work for any bills we may recommend to Congress. That is all I have to report.

The CHAIRMAN. You have heard the report of this subcommittee. What shall be done with it?

Mr. HAZEN. I move it be accepted.

The motion was seconded and the report accepted.

The CHAIRMAN. We will now hear from Mr. Palmer's committee.

Mr. REICHMANN. I took all the thunder away from Mr. Palmer and reported on both committees.

Mr. PALMER. I think Doctor Reichmann is deserving of all the thunder, because he did all the firing.

The CHAIRMAN. I have been very much pleased with the replies brought out by this committee. It shows that all of the great commercial organizations, and many of the manufacturing organizations, will be with us in any effort to bring about uniform weights and measures, or regulations pertaining to them.

Mr. REICHMANN. I might add, Mr. Chairman, that it was the intention of the committee at one time to write to all the manufacturers in the United States, but when we looked over such books as the Buyer's Guide, which gives a list of the manufacturers, and considered the fact that our state appropriation was very limited, we hesitated to send out a hundred thousand letters. So we restricted it to commercial organizations. But I think it would be a very good thing if it were possible to send a similar communication to practically every manufacturing establishment in the country.

The CHAIRMAN. Mr. Secretary, shall we call upon the delegates in order? What has been the custom?

The SECRETARY. We have previously called upon them in alphabetical order, but that is not necessary.

The CHAIRMAN. Unless there is some objection, I will call for the reports in the order that we have the names of the delegates on the list. We might arrange them in alphabetical order, but it would require some little time to do that, and I do not see that it makes any difference one way or the other.

This is the part of the meeting that I always look forward to with a great deal of interest, and I hope that the delegates will go into detail. We are not only interested in hearing what has been accomplished during the past year, but we have some new delegates present, and it would be well to repeat to a certain extent the information that has been given here previously. This experience meeting is an exceedingly important part of our programme, and I hope that each delegate will take all the time that he feels he needs and give us a detailed and careful report of the conditions in his State, especially all additions to laws that have been made or any notes of interest or any progress that has been made in the State during the past year, and in addition to that a general summary or review of the affairs in the State, for the benefit of the new members of the association.

The first on the list is the State of New York. I will ask Doctor Reichmann to tell us what the great State of New York is doing.

Mr. REICHMANN. I can not say some of the things I would like to say in relation to weights and measures.

The CHAIRMAN. We know what they have been doing in politics recently, and we want to know what they have been doing along the line of weights and measures.

Mr. REICHMANN. I am a good deal prouder of what they have been doing in politics in New York than I am of what they have been doing in weights and measures. A few words will summarize what has been done in New York in the way of new laws, and that is that we are working under the law, with few changes, that was passed about a century ago. I might state that we tried to get some other legislation through and did not succeed, but we hope to succeed some time in the near future.

The CHAIRMAN. Doctor Reichmann, what was their objection to the new law—what seemed to be the difficulty?

Mr. REICHMANN. The difficulty seemed to be that the bills were introduced too late in the session and were not introduced by a member in the senate who was aggressive enough to take hold of them. I think the whole matter was one of lack of understanding of the subject, although the matter of weights and measures is of vital consequence to every person in whatever walk of life. It is the one subject which is perhaps least understood, and the accuracy of weights and measures of all kinds of dealers and the weight of all commodities put up in packages is largely taken on faith by the very people who would take practically nothing else on faith. Furthermore, there were certain provisions in the bill which met with considerable opposition, such features as the net-weight clause and the mistake of having the whole weights and measures legislation introduced in one bill. There is, furthermore, an aversion on the part of many to any city inspection, and such aversion was voiced in the constitution of our State by abolishing all inspectors except such as are for the benefit of the public health or for giving the people of the State standard weights and measures. This is, furthermore, a very wise constitutional provision, because up to 1846 there had grown up in our State a system of inspectors—a different inspector for almost any and every commodity imaginable. These innumerable county, town, and city inspectors were without doubt many times used for the purpose of coercion and were a detriment to the dealers. Also, all the inspectors were on a fee system, which meant a continual drain on the merchants. The abolishment of these numerous inspectors was therefore a proper proceeding.

The legislature of 1908 provided for two inspectors and a clerk and sufficient funds to equip the office of state superintendent of weights and measures, which office had been really nonexistent but which is now equipped to do practically any work which it may be called upon

to do in the way of weights and measures. The leader of the majority in the assembly, Hon. E. A. Merritt, is a believer in fairness and uniformity, particularly in weights and measures, and to him and to the gentlemen of his committee and to the members of the senate finance committee will fall due the credit of having started the department of weights and measures and which will eventually assure the people of the State honest quantity even more than they are now assured healthful quality.

I think at the coming session there will be no question of the passage of effective legislation, and I think Governor Hughes is in favor of such legislation, as he, as well as the legislature, is in favor of any legislation that will add to the happiness, comfort, and health of the people by giving them their just due.

Instead of introducing weights and measures legislation in the form of one long bill, it had been split up into several bills, which I will take up later more in detail. The purpose of these bills has been embodied in a letter and sent to the commercial and agricultural associations of the State, asking for their opinion and indorsement, and the commercial organizations as well as the granges have taken an active interest in the matter, and their help will be invaluable. The New York Merchants' Association, one of the strongest organizations in the State, in its Bulletin No. 55, which has just been issued, calls attention to the proposed weights and measure legislation.

The first bill which we propose to introduce will amend what is now known as the "domestic commerce law," in relation to weights and measures, and will be amended along the lines recommended by the National Conference on Weights and Measures, so as to preclude any interference of the state legislation with federal legislation, whatever that federal legislation may be. It furthermore compels the state department to fall back on the National Bureau of Standards for final authority, which is only proper and conducive to the best results and to uniformity.

The second bill provides for the manner of sale of various commodities. The provisions of this act simply conform to the best method in use to-day, and would work no hardship on any legitimate and honest dealer.

The third bill amends the penal statute so that it is a misdemeanor to use a false or unsealed weight or measure, viz, one that has not been sealed within a year, and also providing that the burden of proof shall be upon the party using the false weight or measure. This act, if it becomes a law, will be very effective in stamping out short weights and measures. As a matter of fact, the experience of Massachusetts undoubtedly is that up to the time of the enactment in 1906 of a similar penal statute practically no effective work could be done. It is unnecessary here to enumerate the difficulties of hav-

ing a penal statute in which it is necessary to show before a jury that the accused party had knowledge, and furthermore that the use of a false weight or measure, or the giving of insufficient weight or measure, was done with intent to defraud.

The fourth bill relates to the marking of the net contents of containers, and instead of stating that the net contents shall be shown it will state that the minimum contents in terms of weight, measure, or numerical count shall be shown. There can be no honest objection to such a bill, because the manufacturers of the containers—the boxes, cans, jars, glasses, etc.—could certainly make the sizes fixing a minimum limit. Furthermore, the manufacturer of a food product could estimate the amount of shrinkage. The shrinkage may be considerable in some commodities which are not put up in sealed packages or in packages carefully wrapped with waxed paper, but where the commodity is in a sealed package or is wrapped up in waxed paper, the shrinkage is small where it does exist and can be easily allowed for.

The fifth bill will amend the executive law so that the inspectors of the department are provided for in the law. It furthermore establishes a salary for the state office. The present salary is fixed by law at \$300 per annum. There is no provision for inspectors or assistants, and consequently they really have no standing in law, which is extremely embarrassing in case of prosecution where I wish to use one of the inspectors as a witness.

The passage of these bills would practically eliminate the giving of short weights and measures, would educate the people to knowing what they were receiving, and would prevent that most reprehensible of all short-weight practices of selling commodities by the unknown "package," "cup," "pail," "basket," "jar," "bottle," "glass," "handful," "double handful," "print," "tub," etc.

A number of these features should be federal statutes, and if the bills now drawn up in New York State become laws it will make little difference what federal statutes are passed, as they will simply supplant our measures and our measures can not conflict with them. I propose to-morrow to introduce several resolutions relative to federal legislation and to a full weight and measure organization, and I should have rather spoken more at length on those subjects to-day, because although these experience meetings are interesting they are not of as much value as many think. In New York State we believe in doing things rather than speaking of what we might have done or have done, and that same spirit should be manifested throughout every State, and particularly in organizations which draw from various States of the Union.

The work of the weights and measures department of a State is very exacting and consumes a great deal of time and expenditure of

a great deal of thought for the very simple reason that, as weights and measures enter into practically every transaction, if the state officer of weights and measures is conscientious in his work he encounters the details of practically every form of business concern in his State. Furthermore, he has to deal with the local geographical, industrial, and political conditions in the various cities, towns, and counties. This sometimes brings out amusing cases, sometimes very obstinate local officials, but I will say that in the State of New York, with very few exceptions, the local mayors, councils, chambers of commerce, etc., have been of great assistance, and have done everything in their power to see that proper ordinances with relation to weights and measures were passed and the local office put upon a proper basis.

To add a few more words in relation to what we have done, as that is what some of the members here desire to hear, I will state that we have perfected an organization of sealers of weights and measures of the State, and at our last annual meeting, in February, we had over one hundred sealers present, and a finer, more determined body of men, willing to learn and to go out and do the right thing, I have never seen. This organization is now on a firm footing, and has been of considerable help to the department.

Firmly believing that the majority of cases of shortage in weights and measures is due to the three primary causes which I mentioned in my last report to the governor—viz, ignorance, negligence, and intent—and that the first two of these are the cause of 95 per cent of the shortage, my two inspectors and myself have made throughout the State over 30,000 individual inspections, and have given written warnings (duplicates of which warnings are kept on file) to the merchants so as to aid them in every way possible. We do not prosecute until we are firmly convinced that a man is purposely doing wrong. Unfortunately there are many dealers, small as well as large, who fall by the wayside, due to sharp competition. We wish to help them and weed out the criminals, as it were, among the short-weight artists. The purchasing public and the legitimate dealer should be protected.

There is one thing I would like to see pass the National Congress, and it ought to pass every state legislature, and that is a net-container law. Of course, it is a very difficult matter to draft an effective net-weight package law. Just as soon as a net-container bill is advocated tremendous opposition will be met, because you will have the strongly intrenched positions of packing industries and the biscuit companies against you; and they are all good fighters; they are all effective fighters. When you get right down to it, a net-container law is one of the most important things in the subject of weights and measures. There is a growing tendency to sell everything by the cup, or by the package, or some way that has no legal or commercial

meaning. Probably most of you gentlemen here, unless you have investigated the case, do not know how much a 10-cent package of ginger wafers contains, and that the same amount in bulk sells for considerably less.

I am in favor of putting up commodities in containers because it is a sanitary and expeditious manner of selling them. It is in the interest of the public health to have commodities put up that way rather than to have them put up by some corner grocer who may be more or less unclean. But at the same time I do most sincerely object to asking the people to pay a high price for paper wrapping, and I do seriously object to paying 18 cents a pound for the canvas and paper that goes around a ham. Ninety-nine per cent of the purchasers do not know anything about weights and measures. They simply buy a thing by the way it looks. They will buy a can of peas which is 7 inches high for 10 cents rather than one that is 6 inches for the same price, although the former may be filled only about half full, but the person, of course, can not see what he is getting.

Then take the case of Vermont maple sirup put up in Massachusetts. No one can tell the difference between the two by looking at them, yet one contains $1\frac{1}{2}$ pints and the other contains 2 pints. The latter is put up in Massachusetts, where they have the most rigid inspection. Possibly it will not be sold in Massachusetts, but will be shipped to New York State. It is not sold by the quart, but by the bottle.

It is extremely important that something be done by this association. All these commercial organizations that have been written to expect that something will be done by Congress this time.

It is up to the Director of the Bureau of Standards, it is up to the Bureau of Standards, it is up to this conference, it is up to the Committee on Coinage, Weights, and Measures to see that something goes into Congress this year.

It is highly important that something be done at this session of Congress, if we do no more than simply get a bill in there, so that the people will know that we are doing something.

The CHAIRMAN. We will next hear from Mr. Palmer, commissioner of weights and measures of Massachusetts.

Mr. PALMER. Gentlemen, my report on new legislation will be very brief. At the end of the year 1907, after looking over the work of the year, I came to the conclusion that while the laws in the State of Massachusetts, some of which had been passed in the early forties, very badly needed revision, in view of the fact that possibly the National Bureau of Standards at a more distant date would be in a position to recommend a uniform act for all of the States, I would refrain from making any recommendations for my State. There seemed to be before me for the next year a large field of work in

taking up some of the details of the enforcement of the present law. That to a very large extent has been the work of Massachusetts proper in the year 1908. It has been an intensely interesting work; new features of the question continue to arise entirely different from anything that we had imagined existed.

In regard to the sale of what is known as half, three-quarter, and whole loaves of bread, I recommended that the three-quarter and one-quarter loaves be abolished. The trouble is that we find the whole loaf of bread, which is supposed to weigh 2 pounds, is not sold, but instead the three-quarter loaf is sold. A customer asking for a whole loaf of bread, which is retailed in our State at 10 cents, is not given a whole loaf, but a three-quarter loaf. Then, this three-quarter loaf is not a three-quarter loaf—that is, it does not weigh exactly three-quarters of 2 pounds, but rather exceeds that by 1 ounce or 2 ounces; it varies. In other words, it is really a short loaf, but the dealer avoids the technical violation of the law when questioned by saying that it is a three-quarter loaf and not a whole loaf. It works to the disadvantage of the customer. The legislature did not see fit to change that; in fact, I did not press it very hard. The master bakers were there to oppose my suggestion that the law should be changed. Some provision should be made whereby the enforcement of the law, which is now left to the police power of the cities and towns, would be placed under the local sealer of weights and measures and the state commissioner.

One other change was made in our coal laws. The coal laws of Massachusetts provide for a certain reinspection of the weight by the local sealer of weights and measures. To facilitate that and to protect the customer, it is provided that the dealer shall supply with every load of coal, or every portion of a load of coal, what is known as a “sworn weight certificate.” That must be furnished by the person who is in the employ of the dealer and who is appointed by the city or town under the state statute and sworn to weigh coal. The office of inspector need not necessarily be occupied by a man; it can be held by a woman. We have had the law changed so that it is permissible for a woman to be appointed a weigher. This person takes the oath of office before a city or town clerk. A record must be kept of all coal weighed by such weighers, and the sworn certificate given to the driver. This certificate must contain certain information, namely, the name of the person who sells the coal, the amount of coal that the load contains, as found by the weigher, and the name of the driver or the person taking charge of the load of coal. It ought to be signed by the weigher himself. We found that in many instances, especially in the larger cities, having to place the driver's name on the certificate was a great inconvenience and resulted in

great confusion. For instance, in the city of Boston, we have one concern which employs in the delivery of coal about 2,000 drivers. This concern has about 2,500 teams in operation, located in different sections of the city. It was a common occurrence to find at one wharf three drivers with the same name. I have in mind one case where there were three men by the name of F. A. Bryan in a small place where about 25 drivers were employed. One man's name was Francis, another Fitzgerald, and the other name I can not recall at this time. So the Massachusetts Coal Association, an organization of coal dealers, asked that this law be changed, so as to designate the number of the driver on the certificate in place of the name. The state department tries as far as possible to cooperate with all the trade associations in any movement of this kind. We find that to be a very good policy and to the advantage of our department. The law provides that a careful record must be kept by the coal dealers as to the particular designating number and the name of the driver corresponding to that number, so that in case he was called into court, we would have no difficulty in proving who the driver was.

I made a recommendation to the effect that the county standards, which are in the possession of our county treasurers, be turned back to the State. I did not press that very hard, and the legislature did not see fit to adopt it. I think it will be adopted this year. In Massachusetts, the old law provided for a county sealer of weights and measures, who should be the county treasurer. Each of these county treasurers were supplied, in the same manner as are city and town treasurers, with a standard set of weights and measures. That law is practically obsolete. In the time I have occupied the office I have yet to find one treasurer who is exercising the functions of sealer of weights and measures. I have had letters from the county treasurers indorsing the moves we made, but the legislature did not see fit to adopt them. I did not care, because we were not having much trouble in that direction. It was really the old standards that I wanted to get, so that I could supply them to one or two of the poorer towns which could not afford them, the old sets having been destroyed by fire.

The civil-service commission of the State has made a new ruling during the present year, placing the sealers of weights and measures on the classified civil-service list. Unfortunately, we have had a general civil-service law which provided, among other things, that the head of the department could not be placed on the civil-service list; therefore the head of the department is exempt. However, the deputies coming into the department are now on the classified list. At the present time we are about to hold an examination for the appointment of deputies for our larger cities, the first examina-

tion for which has already been held. The state department itself has been very much in favor of the classification of the sealers, and I think this year we will have a bill before the legislature providing that the sealers themselves—the heads of the departments—shall be placed on the civil-service list. I believe that is the only way in which these troubles that are constantly occurring in the cities and towns can be taken care of. By getting good men into office who will prove efficient and do good work we can overcome these troubles. In one city we had the salary of the sealer increased three times in two years. The trouble has been that when an election occurred the man in office was supplanted by another, who, in a great many instances, would prove incompetent. I think possibly that will be done away with during the present year.

That takes care of everything so far as the changes in the statutes go. As I said, we need a revision of our laws; we need it very badly. This need is felt in the state department almost every day, because important questions come up that we are not able to take care of very well under the present statutes, but which I hope will be taken care of by the new legislation which the National Bureau of Standards will, I hope, before long, recommend to the different States, so that the law in Massachusetts will be exactly the same as in Texas, with the exception of some few trifling details to be adjusted to fit the local conditions. We have been taking up phases of the work which we have never taken up before. We have made a large number of prosecutions. The state department itself has made over 100 in the year. We have not lost a single case. Some of these cases have been in the superior court; some have even gone to the supreme judicial court. I have attempted, as far as possible, to get the local sealers to bring cases and to cooperate with them in obtaining convictions. We find that it is a splendid thing for the local sealer to convict a man in court for delivering short weight or cheating in weight or measure, because he earns the credit of his own community; then if he asks for anything, such as better facilities for doing his work or an increase in salary, he usually gets what he asks for. We have done everything we can along this line, because there are certain things we could not take care of if we brought these prosecutions ourselves.

For the benefit of those who are not familiar with the Massachusetts law I will say that we have four state inspectors who operate under my direct supervision, and the other local city and town officials are indirectly under my supervision.

We have had, as I say, a large number of prosecutions. In one of the principal cases a decision was handed down from the supreme judicial court to which we refer with a great deal of pride. It was given in a case brought by a prominent scale company of Dayton,

Ohio, against the sealer of Cambridge. The scale company attempted to enjoin the sealer from condemning certain types of computing scales made by this particular company. By agreement the case went to the supreme court, and we had a decision in our favor. I say in our favor because, although the decision was given nominally to the sealer, it was really a victory for the whole department. The state department could not take any action in condemning scales of that type; the action had to be taken by the sealer of weights and measures himself. The court can not enjoin the state department from giving any information, but it can enjoin the local officer from taking action in the condemnation of any scale. We had a splendid decision from one of the justices of the supreme court, and then the matter went to the full bench. That case was decided in October, 1908. It upheld all of the claims which the state department and the local department had made in relation to that particular type of scale, and it went even beyond that. The question had been a very serious one in our State. We practically have been the pioneer State in taking up the question of the computing scale. It has been a long problem, and a hard one. We have been thoroughly antagonized for taking the position we have; but I am thankful to say that the supreme court of the State upheld our position in the matter.

We have tried to take up the question of selling liquor. We have had a number of prosecutions for the selling of short quantities of liquor, and that is a question that will probably come up in all of the States unless we have the national legislation which we are proposing. Our particular attention has been called to the sale of what is known as the short half-pint. I found upon investigation that these half-pint bottles, or bottles supposed to be half-pint bottles, bear on the outside the glassblower's mark to that effect. In 99 per cent of the instances, instead of containing 8 ounces they hold $6\frac{1}{2}$ to 7, the latter being a liberal size. It was established that the dealers were selling these goods under the consent of the Liquor Trades Association. Their attorney came to see me and we talked it over. He said we were unwise to attempt to force them to stop it, as the custom had been established. I said, "All right; if you do it, you will be prosecuted. We are attempting to make the grocer, who does not make as much profit as the liquor people, give 16 ounces to the pound, and I do not see why the liquor dealer should not give 32 ounces to the quart. The package should be sold for exactly what it contains and not under false pretenses." The attorney for the Liquor Dealers' Association happened to be a particular friend of mine, and after the conference with him I came to the conclusion that they would fight us. He said, "We have done this thing for years and we will do it now."

My inspectors made purchases of short bottles, and we prosecuted the dealers, and in every instance in the lower court we convicted them, they being obliged to pay a fine of from \$10 to \$25. In a first case of that kind we always recommended a small fine. They all took offense at the prosecutions and did all they could to antagonize them, and the cases went to the supreme court, but in no instance has a case been called in the superior court. The latest information I had on leaving my office Monday was that the only case outstanding was in Hammond County superior court, and that case would be settled out of court by payment of the fine.

We do all we can to cooperate with organizations of that kind. If they can not give full-measure bottles, we find out the reason why. I have had from time to time a meeting of the representatives of the glassblowers in the East to talk the matter over. I find the general opinion is this: If the dealers insist on full-capacity bottles, they get them, and in no instances have I found a bottle maker's agent who would not guarantee to furnish full-measure bottles.

We have a very broad statute in Massachusetts, of which perhaps some of you know, which provides that: "Whoever, himself or by his servant or agent or as the servant or agent of another person, is guilty of giving false or insufficient weight or measures shall for a first offense be punished by a fine of not more than fifty dollars, for a second offense by a fine of not more than two hundred dollars, and for a subsequent offense by a fine of fifty dollars and by imprisonment for not less than thirty nor more than ninety days." This statute was passed a couple of years ago. I think it is worth all the rest of the state legislation we have on the subject. It is very broad and far-reaching.

There are many other matters along these lines, but I can not take the time to talk on them. There are many details of which I would be glad to tell you personally. I believe one of the chief things to which the state department of weights and measures of Massachusetts owes its success is the fact that we have attempted to give publicity to the work. I find that the press is a very powerful organization for helping us along. The press of Massachusetts will print, in just the shape that I give it, practically any kind of news item. I have a system of copying, and carefully record all news items that I give to the press, and I can not remember a single instance where it has published anything in any other manner than as I gave it.

We have taken up the question of strawberries in baskets, requiring them to be sold by measure, and that the baskets used shall be of a certain capacity, namely, 1 quart, 1 pint, and half pint. If they are offered for sale in boxes of any other capacity, the dealer or whoever offers them for sale is liable to be subject to a penalty of from \$5 to \$10 for each offense. Three years ago we told the commission

merchants of that and informed them as to the law. Through the trade journals I had it published in all the berry districts, so that the berry growers could be informed what the requirements were. We tried to enforce the law, and I think we had something like twelve or fourteen prosecutions. After that we found the baskets coming to Massachusetts were all right. We had no prosecutions last year to speak of. I think we found only three cases where short berry boxes were being given. As a rule, those short boxes held about 10 per cent less than they should. In Boston we have nine dealers who sell baskets to our local trade, and Boston covers practically all of the New England districts. I found one dealer with 180,000 boxes in one lot, which were from 10 to 12 per cent short. These boxes were about to be sent broadcast throughout the New England trade; in fact, some of them had gone out to the Cape District for berries. These berries come to Boston toward the last of the season and sell for 15 cents a quart. If the 180,000 baskets had come back short it would have represented a loss to the public of over \$2,700, at an average of 15 cents a basket.

We have in Massachusetts what we call a food fair. This is held under the protection of one of our large grocery associations. Massachusetts has two very powerful grocers' associations, which include practically all cities and 70 to 80 per cent of the grocers of the entire State. They have these fairs, or expositions you might call them, which are attended by great crowds of people, and are very successful. The exhibit, which lasted for the entire month, was visited by 20,000 or 30,000 people daily. Practically the only expense to the State in having the weights and measures department represented was the detailing of three men who were always in attendance during the hours of the exposition. You would be surprised to see the mass of people that came and stood in front of the cases listening to the short lectures and discussions the inspectors gave as to the methods of inspection adopted. I think that has been of more value to us in enforcing the law than anything we have done. We could issue detailed reports from the office, statistical reports, and so on, and not one person in five hundred would read them; but when you stand in front of people and show them a 6-quart measure cut down to 4 and a 4-quart cut down to 2, etc., they are bound to be interested.

In November of last year a conference of all the governors of the New England States was held at the Tremont, in Boston, and at that time certain questions were discussed in relation to the advisability of uniform legislation along the lines we are discussing here to-day. One of the things that was taken up on the first day was a paper by Mr. John Craig, professor of horticulture in Cornell University, making a comparison between the possibilities in the orchard industries of Massachusetts with the growth of the orchards

in Oregon. One of the things which was brought out very forcibly and which resulted in general discussion was the lack of uniformity in packages and methods of packing apples. That is one of the things which the governor has since taken up with me, and I think it will result in all of the New England States adopting some kind of a uniform package for retailing apples. There is no reason, to my mind, why there should not be uniform packages for the retailing of all commodities, and I think the key to the whole situation is national legislation along this broad line.

On my way to this conference I got into a conversation with one of the chief leather dealers in the United States. As soon as he knew who I was he introduced himself, and he was very enthusiastic. He said the thing we need in the leather trade more than any other one thing is a uniform measuring machine which can be utilized. He told me of a case in which he would probably have had to allow a claim of \$1,300 on one shipment of leather had he not been forewarned of the matter and had the local sealer in his town to make a measurement of the leather before shipment.

The CHAIRMAN. I would like to have had Mr. Palmer go on with his remarks in regard to leather, because a machine for measuring leather was recently submitted to the Bureau for test and investigation.

The conference adjourned to take luncheon.

SECOND SESSION (AFTERNOON OF THURSDAY, DECEMBER 17, 1906).

The meeting was called to order at 2.30 o'clock, with Mr. Palmer in the chair, in the absence of Doctor Stratton.

The ACTING CHAIRMAN. Gentlemen, we will first hear from Mr. George H. Pettis, state sealer of weights and measures of Rhode Island.

Mr. PETTIS. Mr. Chairman and gentlemen, I understand that this is to be a talk on personal reminiscences. I want to say a word in behalf of the Journal of Weights and Measures. I was the publisher and editor of two periodicals in San Francisco in 1858, 1859, and 1860; consequently I have some ideas about publications of this nature; and as I am the oldest member of this association my testimony should be added to what has been said. This publication is worthy of our earnest support. I have had the first number, but have only seen the second number since coming here, and in it is an article as to these snide trip scales. Now, in Rhode Island we do things a little differently than in other States. In Rhode Island we have no city ordinances. The State passes statutes, and these statutes govern the whole State. The only thing that is left to the city or town is the method of paying their sealer. If a man is paid by salary, he exacts the same amount of fees from merchants, but that is paid into the town or state treasury. It makes no difference to the merchants.

In Massachusetts all the work brought into the office is done there free. When they go out with their teams, they charge for it. We do the same thing, but we also charge fees for the apparatus brought into the office. For work done outside of the office, such as transporting material back and forth from the office to their places of business, the merchants are charged at the rate of 50 cents an hour for the use of the team.

I have been the state sealer now some seven years past, and I have adopted the plan of having the legislature make an appropriation to enable me to travel about the State. An appropriation is made every year for this purpose. Along through the summer, after most of the sealers of the towns and cities have finished their work of sealing, I make my visit; I go through several of the stores in a town without notifying the town sealer in advance. I look over his work to see whether it has all been done properly. If it has not, I take him to task for it. For instance, last July I went down into a certain

town, and found that the sealer had neglected to test dry and liquid measures. I wrote him a letter asking why he had not attended to it, and his answer to me was not satisfactory. Again in October I went to his town and found that he had not yet tested these measures. I went to his house and asked him why he had not attended to the matter, and not obtaining a satisfactory answer I wrote him a formal letter in which I stated that if he did not take care of the matter by the 25th of October I would call the attention of the authorities to the matter. Five days later I got a letter from him in which he reported that he had gone around and tested all the dry measures, and had seized two scales. I will give you another instance to show you how a little assistance will effect a great deal. I went to Toledo the last week in August to attend the meeting of the Grand Army. There I met the city sealer, a Mr. Kellechner. I found that he was very much interested in this question, and was going to make a good officer. The second morning of our acquaintance, as he and I stood on a street corner, a peddler came along with a horse and wagon, and we noticed a measure. I said, "Let us take a look at his measure." So we went over to where he was and I said, "I want to see this measure." He handed it to me and after looking at it I said, "This measure is too small." We took the measure to the office, tested it, and found it too small. The sealer seized the measure; he did not prosecute the man as I should have done if I had caught him in Rhode Island. The sealer has since written me that he has secured fifteen convictions for using short measures.

He has also sent me a photograph to show at this convention, and wrote, "Do not overlook berry boxes, and apple, sweet-potato, and cranberry barrels."

In regard to matters in Rhode Island, at the last meeting of the legislature we had a law passed in regard to coal and wood baskets. When I was the city sealer of Providence, in 1893, we had no law in regard to coal and wood baskets, and on one occasion a team came by with 6 baskets of coal on it which I noticed were very small. I followed the team for 2 miles before I came to the place where delivery was to be made. The driver stopped, and I allowed him to deliver 2 baskets before I went up and spoke to him. I found that the coal was being delivered to a poor woman with three children. I weighed this coal and found that this poor woman was paying at the rate of \$19.25 a ton for the coal, when the same coal could be bought in Providence by the ton for \$5. That woke me up to the necessity of having a law enacted in regard to coal and wood baskets, so I took the matter up when the legislature convened again, and we had an act drawn up. The law read something like this: "Coal sold by measure shall be sold in standard baskets, sealed."

That law was enforced for nearly two years, when I found that dealers were selling coal in small baskets. I went to see some of these dealers and found that instead of selling 80 pounds of coal to the basket, which the baskets by law should hold, they were selling baskets weighing 25, 30, 35, 40, and 50 pounds. I asked them why they did it, and if they did not know the law. They pointed out that the law read "all coal sold by measure." The words "by measure" should never have been there; that changed the whole effect. I could not prosecute them under the law, because they were not selling by measure; they were selling by weight. Last year in the legislature I drew up a new act to cover the case. It reads like this: "All amount of coal over 100 pounds shall be sold by weight, 2,000 pounds to the ton. All coal sold under 100 pounds shall be sold by standard basket, 80 pounds to a basket." We have enforced that law and it has done a great deal of good, although a day before I came here I learned that the dealers had found a new flaw in it. I addressed a letter before I came away to our attorney-general asking for his opinion on it. When I get back I will take the matter up.

I want to call attention to the fact that to get this law passed by the States and to have it enforced we must have national legislation. The Constitution provides that the Congress of the United States shall have charge of all weights and measures. That is all there is to it; there is nothing more. Any law that we have passed relating to uniform weights and measures throughout the United States will have to be observed. As long as you have such men as Doctor Reichmann, Mr. Palmer, and Mr. Kellechner, and some others I can name, the laws will be enforced in the States. But we want them to be enforced alike all over the country. We want them enforced in Massachusetts in the same way that they are in Rhode Island and Illinois. To be sure, there is a difference in States. In Rhode Island I can go around to all the towns in the State in two weeks time. I go around about three times every year to the different towns, but I know that in the other States, such as New York, Massachusetts, Ohio, and Indiana, a state sealer can not do what I can do in Rhode Island. The State of New York, for instance, has 900 towns; Rhode Island has 38. In New York one man could not attend to all the work.

Mr. WALL. I would like to ask Mr. Pettis a very commonplace question. Have you made any particular tests to show whether it makes any difference where you place the weight on one of these trick scales?

Mr. PETTIS. Yes; I can tell you. I found that out years ago. The illustration in the Journal of Weights and Measures, the November number, explains thoroughly the whole matter. There are many of these cheap scales in use. They are in use in Rhode Island now, but I

will venture to assert that in the State of New York there are 15,000 of these scales in use to-day.

Mr. REICHMANN. The truth is that when there is no inspection the dealers, especially the small dealers, are always looking to get the cheapest thing they can get, and of course unscrupulous manufacturers are encouraging them. They will take a scale of a certain make and use it as a pattern to cast something that looks like a scale. I know that they are selling in New York a certain type of scale at \$9 a dozen. You take any standard make of scale of this type, you can buy none of them at that price. And what is the result? It is just as I saw illustrated in the city of Rochester last summer, where they take a casting and merely dip it into paint. It is just like watered stock. A man was selling a scale at \$1.65, one of the bearings of which had broken off because the iron had chilled. The dealer said, "That is all right; it acts just as well with three bearings as it does with four." Now, the innocent buyer could find no difference as far as the appearance of the scale was concerned; the buyer does not know anything about it. The average dealer in groceries has no technical knowledge of scales.

Mr. PERTIS. You will not find that situation in American groceries; you will always find that among foreigners—the Italians. It is particularly the Italians who buy these cheap scales. They pay only 90 cents for a scale.

Another scale that has given us all trouble is what is known as a sliding-face, spring-balance scale. It is a scale used by peddlers who buy rags, bones, bottles, and things of that sort. They put their thumb in the ring, and by holding on to the hook with their forefinger they can move the indicator up and down. If a woman has 50 pounds of rags she wishes to sell, when the rag peddler comes along he weighs them for her. She may really have 50 pounds, but she is not aware of the fact. The dealer will manipulate the scale so that it shows but 24 pounds. The dealer pays her for 24 pounds and goes away satisfied, and she is satisfied, because she has seen the weight. We have confiscated something like 23 of these scales in Rhode Island, and in each case the man was fined \$20 and costs.

The ACTING CHAIRMAN. We will next hear from Prof. Benjamin F. Thomas, state sealer of weights and measures of Ohio, who will make the report for that State.

Mr. THOMAS. Mr. Chairman and gentlemen, after the last session of this convention I took a copy of the proposed legislation as to weights and measures which was adopted here and inclosed it with a report of the work done at the conference and sent the same to our governor, asking that he submit it to the legislature about to convene and recommend legislation proper to the State of Ohio along these

lines. He did so. He made the matter the subject of a special message to the senate, and it was filed with the senate, but nothing further was done in the matter.

This fall I have had a conference with some of the state officials over the matter, and the secretary of state promised me just before coming here that he would draw up or have drawn up in his office a new code as to weights and measures for the State of Ohio along the lines of this suggested legislation. There will be considerable support in behalf of this, but I do not know whether we can expect it to be passed at this session. I am advised that it is the purpose of those who are the leaders in the session about to convene to make the session as short as possible. The main business will be the election of a United States Senator to succeed Senator Foraker and the passage of the appropriation bills. The leaders do not intend to make it a session for general legislative action, but this matter is of such importance that I have been assured of its receiving, possibly, some consideration.

In the State during the past year there has been a growing amount of attention paid to the subject of weights and measures, locally. The state sealer has no power over the local sealers in the State of Ohio under state laws, but a number of local sealers have become much more active than they were, and many inquiries are coming into my office from private citizens and from corporations as well as from local sealers.

It is my purpose when I get back and have a copy of the bill which the secretary of state has promised to draft for reference to call a convention of local sealers and of representatives in cities where there are no local sealers, to lay before the convention the proposed bill. I hope to enlist their interest and cooperation.

There is one matter in which the state sealer has exclusive authority, namely, the testing of meter provers used by both the artificial and the natural gas companies, and I have been much pleased during the past year to find that there is a really honest desire on the part of the large gas corporations to get their meter provers correctly in place, and to use them in such a way as to secure truthful tests of meters. I had an interesting experience in the city of Findlay, Ohio. That city is supplied by the gas company with natural gas. This gas company submitted to me in the spring a new meter prover for test. It was tested and found correct, and soon after the city of Findlay, through its council, provided for a city meter prover and appointed a city meter inspector. They submitted that meter prover to me for test; it was tested and found correct and sealed. Thus, there were two certified meter provers in the same city.

I received during the summer months a letter from the natural gas company stating that it had been found that certain meters tested by

their meter prover and by the meter prover of the city inspector showed a difference of some 5 per cent in the two tests, and wanted to know whether the two meter provers could not be reinspected. I replied, saying that I should not object at all to repeat the test, but I knew that the result would be the same, that the meter provers were correct. The difference found in the test arose from the difference in the methods of using the provers. As anybody knows who has ever tested meter provers, a meter prover may show an error of 2 per cent in its indications, depending on the temperature and the humidity of the air or the gas that is used in making the test.

Upon my return to Columbus the natural gas company's representative came to me again and I explained the whole matter to him more fully, thus settling the whole question. He then asked me if I would not prepare directions for inspection for use by their meter inspectors. I declined to do so officially. The company drew up instructions for the use of its gas men, and submitted them to me for examination. These instructions covered the entire matter completely. One of the points made in connection with the inspection was that of insuring uniformity of temperature in all parts of the apparatus, and particularly the insuring of the saturation of the air or gas that was used, and, as nearly as possible, of the air in the testing room. I showed him that by taking dry air into the prover and letting it stand for a few minutes the valves being closed the register of the meter would show as much as 2 per cent variation arising from the evaporation and saturation and cooling, and then the subsequent warming of the gas within. The meter-prover question and the meter-testing question in Ohio is now, I think, in a very satisfactory condition.

I think the situation in Ohio with regard to weights and measures while it has been rather quiet, is becoming more and more disturbed, and I think the time is ripe for effective action along the lines which we have already discussed.

Mr. PERRIS. I forgot to mention one thing to show the necessity of having laws throughout the United States the same. When I was in the office of the city sealer of Toledo I noticed fifty 8-quart measures, which had been brought in a day or two before. They were made of heavy sheet iron, painted black, with a neat rim around them. I was asked to test them. I found every one of them absolutely correct according to the Winchester standard. He showed me the measures that he had received from the authorities at Columbus, three in all, a half-bushel, 8-quart and 4-quart measures. They are not like ours furnished by the Government, but taller and smaller, made of different material and very nicely painted. He said that the 8-quart measure held nearly a quart more than it should. I mention this fact to show the necessity of having the laws the same throughout the United States.

Mr. THOMAS. Mr. Chairman, I should like to mention one other point, one which I have overlooked. I have had a number of inquiries, the last one being official, regarding the question of the selling of commodities by measure or by weight in the case of commodities which are by law specified to weigh so much per bushel. Section 443 of the Ohio statutes provides that in the case of certain commodities a bushel shall contain the number of pounds specified for each article, and then follows a list of such articles. The case was submitted by the mayor of an Ohio city, and is as follows:

"A" bought a peck of potatoes from "B," and thinking that he was not receiving full measure he had the potatoes weighed and found that they weighed $13\frac{1}{2}$ pounds, whereupon "A" had "B" arrested, the charge being the giving of false measure. "B" made the defense that the measure that he had used in measuring the peck of potatoes was sealed by a former official sealer of that city. The question was submitted to the attorney-general in that form. Another question was also submitted, which was that in the case of a commodity whose weight per bushel is defined by the Ohio statutes does the statute specifying the weight govern the buying and selling of such articles, or does the statute specifying measure, as in the case of dry commodities, govern? I received his reply by telephone just before coming away, and he said that in the particular case cited he thought "B" was not guilty of a crime, because "A" had seen the measuring done with a standard measure, at the time of purchase, and he accepted the article, thereby making the transaction legal. Furthermore, it would be difficult to prove in the transaction as described that there was any effort or any intention on the part of the seller to defraud. The attorney-general said in relation to the general question that if a person were to purchase or to order from a dealer commodities whose weights were specified in the statutes he would be entitled to receive the quantity called for as determined by weight and not by measure; that if, in the particular case cited, "A" had bought his peck of potatoes and had received $13\frac{1}{2}$ pounds without being present to see the measurement made he would be entitled to 15 pounds instead of $13\frac{1}{2}$. In other words, that the statute specifying what a certain commodity is in pounds was the governing statute, and even in that case it might be difficult to prove that "B," in making the sale with a sealed measure, had been guilty of any intent to defraud. This is the situation with us in regard to that question. I bring it up, and hope that if any of you have requested decisions on those points you will give us the benefit of your experience.

The measures at Toledo, referred to by Mr. Pettis, were not furnished from my office.

The ACTING CHAIRMAN. I think the point Mr. Thomas has brought up emphasizes the fact that we should have national legislation on

this subject, and that the weight of a commodity should be determined after a series of careful tests, by the Bureau of Standards, showing what the weight of a bushel should be. I referred to the fact several times that there is a discrepancy in the weight of a bushel of onions between the State of Massachusetts and the State of Rhode Island, and if you will consult the compilation of laws issued by the State of Rhode Island you will find all through it variations in the weight of different commodities as prescribed by the different statutes. I think that is a very important question, and one that is going to constantly recur, especially when the law is being more rigidly enforced in the different States.

We will ask Prof. Laenas G. Weld, state superintendent of weights and measures of Iowa, to report for that State.

Mr. WELD. Mr. Chairman and gentlemen, the office of state superintendent of weights and measures, as I have had occasion to explain before, is located at Iowa City instead of at the capital. In some respects this is unfortunate, but it is a matter of history.

Iowa City was our first state capital and remained so until the year 1857. Last May we celebrated with considerable formality the fiftieth anniversary of the adoption of our present constitution, and the occasion was also the semicentennial anniversary of the removal of the capital to the city of Des Moines.

The old capitol building is now used as the executive building of the university. The small building, a brick vault of about 24 by 30 feet, which had been erected for the accommodation of the standards furnished by the General Government, continued, however, to serve its original purpose. In the new constitution just mentioned it was and is provided that the state superintendent of weights and measures shall be a member of the faculty of the university "possessed of sufficient scientific knowledge and mechanical skill to perform the duties devolving upon this office."

Thus, the provision is deeply entrenched in the constitution of the State, and any proposed changes must be practically in accordance with it, as it would be quite out of the question to enlist enough interest in the matter to have it made the subject of a constitutional amendment. The office pays no salary which will warrant the superintendent's giving any considerable attention to its duties further than as actually required by law, as his first obligation is to the university, of the faculty of which he is by necessity a member, and it is of course not to be expected that he will receive a duplicate salary from the State. Neither can I agree with the opinion that services in such an office should be rewarded by fees. However, there is no real difficulty here, as it would be perfectly practicable to comply with the requirements of the constitution by nominating some person fitted to perform the duties of the superintendent who should

receive a salary fully commensurate with such duties from the State and at the same time hold an appointment at a merely nominal stipend as a member of the university faculty. His obligations as an employee of the university would thus be slight and practically his whole time might be devoted to duties pertaining to his office as superintendent.

Some years ago one of the popular magazines sent an explorer west to write characterizations of some of the Mississippi Valley States. Among other agreeable things which this redoubtable gentleman had to say about Iowa was that the State is "upon a 'dead level' like its own prairies." This is largely true, but he might have added that Iowa is also upon a high level, both morally and intellectually; so much so that I am positive that no such condition exists as has been reported by some of us. The population of Iowa is remarkably homogeneous. The people are prosperous, are intelligent enough to look after their own interests, and are abundantly able to do so, even if it involves the expenses of a legal process. No man can do business in Iowa and habitually impose upon his fellow-citizens by such primitive devices as false weights and measures. Every farmer has his scales, and if those of the elevator company or of the cattle buyer or even of the railroad company do not agree with them he has nothing to fear from raising a "howl" that will be heard through the whole community.

Along these lines there is very little trouble. Neither is the situation complicated to any very serious extent by large cities, the largest city in the State having a population of hardly more than 50,000. Even in these larger towns there is no considerable element of very poor people. There is not a slum, in the usual sense of the term, within the borders of the States, and the imposition practiced upon the miserably poor in such cities as New York and Philadelphia finds no very extensive parallel with us. Of course, the fact that difficulty of this sort exists to any degree at all is sufficient warrant for securing adequate protection for those affected, and I have little doubt that such protection will be forthcoming as soon as we here can definitely determine what seems to be the best procedure. We must, moreover, look forward to the time when we too shall become more "highly civilized."

What we need in Iowa more than inspection of scales, weights, and measures is adequate and effective package legislation. We are, like other people, careless enough to buy milk and vinegar and catsup by the bottle, crackers and breakfast foods by the package, coffee by the can, butter by the "print," and often are much imposed upon in this way. This is not as it should be and can readily be remedied by any reasonable package law. There is already ample provision in our code to protect us against fraud in cases in which the net

weight or quantity of contents is overstated on the container. As I understand our statutes, however, there is no fraud committed in selling a package of crackers for 5 cents, whether the package contains 8 ounces or 5 ounces. In this connection I may mention that a case has come to my notice in which the manufacturers of a well-known breakfast food have been brought before the federal court at the instance of the pure-food commission for overstating the contents of its packages.

I should like at this point to indorse Mr. Palmer's opinion that eggs should be sold by weight instead of by the dozen. The present practice is not one whit less objectionable than that of selling goods in packages of purely conjectural capacity. In fact, we in Iowa suffer from this imposition—it can not be called a fraud—about as much as can well be imagined, for the reason that the egg buyers enter our markets, buy up the biggest eggs, and send them to the cities. The same condition is to be noted in the case of other commodities, the local consumer being put at a disadvantage.

Whatever may be the situation in other States, I am certain that in Iowa the best and most directly attainable method of securing general inspection is through the appointment of county sealers of weights and measures. Provision is made in our code for such appointments, but the statute is not mandatory and there is no salary attached to the office. Unless a salary be fixed by the county board of supervisors, the sealer is reduced to the extremity of making his office remunerative through the fees collected. These fees are not and can not be made, except by petty tyranny and browbeating, a decent compensation for any man who is able to perform the duties of the inspector. Thus it is that of the 100 counties in Iowa there are not half a dozen in which there are regularly appointed sealers. Perhaps a dozen or fifteen of the cities have market superintendents or inspectors of scales appointed by the city council or mayor. They are not, however, in the proper sense inspectors, but merely official weighmasters or wood measurers, or something of the sort, and are acting under special city ordinances rather than under state statutes. These ordinances only provide the protection that should be provided the purchaser of coal, wood, hay, and other coarse commodities. Some city ordinances provide also for the regulation and testing of gas meters. In the smaller towns there are maintained private scales for public use, the owner charging a small fee for each weighing and thus making his investment and trouble mildly remunerative. The owners of such scales have frequently asked for iron weights with which to test or adjust them. They are sometimes licensed to perform this function by the city council. Under whatever authority they are acting, if any, they are sure to be closely watched by the farmer or coal merchant on the one hand and the con-

sumer on the other. Being disinterested parties there is little or no reason why they should willfully keep false scales.

By such means as these matters are kept "straight" in Iowa, and I believe that, relatively speaking, there is little chicanery of the sort which we have had so abundantly illustrated in these meetings. The whole subject is, however, in confusion; but local self-government is something which our communities will not readily give over, even in matters of detail.

It is obvious that, in the midst of this confusion, the office of superintendent of weights and measures is one of rather uncertain function. As specified in the code, the principal duty of the office is to furnish such standards of weight, measure, and capacity as may be ordered by county or city sealers of weights and measures. As a matter of fact, however, few such standards are ordered. They are frequently ordered by private parties—manufacturers, packing houses, elevator companies, or the like—seldom by a county board or a city council. Letters frequently come asking for the adjustment of some difficulty or misunderstanding. Such cases are often disposed of by shipping to the parties interested perhaps half a ton of test weights, a supply of which I have found it convenient to keep on hand for this purpose, even at my own expense. Along with the weights I generally send a letter of instructions which any intelligent mechanic or farmer or tradesman will be able to follow to the result of either confirming the accuracy of the scales in question or of condemning them. I fancy that the results of such inspections are fully as satisfactory as they would be if the tests were made by such a county sealer as would be appointed by the average county board.

In this connection I am going to take the opportunity of speaking a good word for the railroad companies. They may bear pretty heavily upon us in some ways, but whatever other means they take to do it they do not descend to the use of false weights and scales. The scales used in the ordinary railroad depot are, for practical purposes, as good a standard of reference as we need have. I know that the various railroad lines traversing Iowa have provided for the periodic inspection of the platform scales used in their stations and of the track scales upon their sidings. Elevator men seem to be equally particular, and, in fact, there is an abundance of standards of reference for any one desiring to keep a correct set of scales or to secure evidence against a party who does not so desire. This is how it comes about that in a State where the state sealer is vested with the very minimum of authority a general uniformity in the matter of weights and measures is maintained. There is some petty thieving through the use of short milk bottles, short berry boxes and baskets, the use of liquid measures for dry measures of capacity, and similar devices; but there is no question in my mind but that a little judicious

legislation and agitation would put an end to all but the merest remnant of such a condition.

If we can agree upon some uniform method of procedure, and if we can secure some effective package legislation, there is no question but that in Iowa the difficulty will be at an end. There is, however, no use in proposing measures which will require our counties and towns to invest hundreds of dollars apiece in standard balances and weights and measures which may excite some spasmodic interest and afterwards be left to rust in some basement storeroom of the court-house or the city hall. I am waiting for this association to agree upon practical recommendations with respect to this problem, after which I shall take pleasure in laying them before our state authorities. Our code is obsolete with reference to the question, but the fact that the legislature has appropriated the money to pay my expenses to this meeting shows that there is some interest in it. I do not think that it will be difficult, if the legislation here proposed is reasonable and practical, and the expense of its enforcement not too great, to put the inspection of weights and measures on a perfectly satisfactory basis in Iowa.

I thank you.

Mr. PETTIS. What is the condition of the standards sent you?

Mr. WELD. When the office of superintendent of weights and measures was established, which was before the capital was removed to Des Moines, a small brick building was erected for the accommodation of the standards furnished by the General Government, as I have already stated. This building is very substantial, practically fire-proof as far as danger from the outside is concerned, and is of such construction as to insure the greatest possible dryness within. The floor was laid up with gravel, sand, and lime in successive layers, with a top layer of flagstones. At any rate, the standards have kept very well; being, moreover, very little used, they do not show the slightest signs of wear. At one time the roof of the building was neglected and one of our standards of length was ruined by water which leaked through upon that occasion. We never have any use for this standard, so I do not know that any harm has been done. The standards of weight and measure are, apparently, in perfect condition, and I believe that it is perfectly safe to use them. The measures are slightly tarnished, but not corroded inside, and would possibly, if brought here and tested, show a diminution in capacity amounting to some thousandths or ten-thousandths of a cubic inch. Perhaps the weights would, from the same cause, show appreciable increments. The case is different, however, with the set of metric standards sent to the office some time in the seventies. The brass in these standards seems to have been poor—porous, perhaps. At any rate, all of them have become badly corroded and unusable. Fortunately we have no use for them.

The SECRETARY. They were probably made of poor material.

Mr. WALL. I want to ask you this question: Have you no legislative authority for the establishment of the office of sealers of weights and measures in the cities?

Mr. WELD. Yes; cities and counties may appoint sealers.

Mr. REICHMANN. Is it purely a matter of volition on the part of the county?

Mr. WELD. Yes. The code is not mandatory in that respect; it simply provides for the office. I may add, at the risk of repetition, that the duties of the superintendent of weights and measures are not in any way connected with the matter of inspection. The superintendent simply provides standards to regularly appointed county or city sealers or inspectors as they may be ordered of him. He has nothing to do with the inspection itself.

The ACTING CHAIRMAN. The next on the list is Mr. W. C. Haskell, sealer of weights and measures of the District of Columbia.

Mr. HASKELL. I do not know that there is anything in particular that I can say that will be more interesting or different from what we have been listening to. We have the same trouble with short weights in the District of Columbia as you have in other parts of the country. Perhaps we are differently situated, though, in getting legislation for the benefit of the public. Our board of aldermen is the United States Senate and our common council is the House. All of our legislation has to go through Congress. That relating to weights and measures is requested by our office and has to be recommended by the Commissioners of the District of Columbia.

I have been interested regarding the remarks made in the matter of potatoes, among other commodities mentioned. Our law in the District of Columbia reads that potatoes when weighed shall weigh 60 pounds to the bushel. The consequence is that in the fall of the year, when potatoes are green and heavy, they are weighed, and in the spring, when dried out, they are measured.

I think the whole matter resolves itself into this, that a committee should be selected by this conference to present to Congress a suitable law on weights and measures that will be general all over the country. I am becoming very much impressed with the necessity for this. We have felt that matters in the District of Columbia in regard to weights and measures were in a satisfactory condition, but there are new difficulties arising all the time. At the last session the Commissioners submitted to Congress, on the recommendation of our office, an amendment to a section of the law that all commodities should be weighed or measured in scales or measures duly tested by our office. When it got to Congress the proviso "when weighed or measured" was supplied. The consequence is that we are somewhat handicapped

in compelling dealers in the District at the present time to weigh or measure certain commodities.

There is a growing practice of selling articles by the package, berries by the box (although berry boxes in the District must be standard size), and potatoes by the barrel, there being no stated amounts. It is so with many commodities. Oil is sold in some instances by the can, which may be standard, but short in contents, and flour by the sack. For instance, two years ago a thirty-second sack of flour weighed $6\frac{1}{2}$ pounds net, for which the people paid 20 cents. That amount has been reduced, so that the thirty-second sack holds only about 5 pounds, and the people are paying the same price. The people who buy flour by the barrel usually get 196 pounds, but the poor people, the people who have to buy in small quantities, are paying a much higher price for flour, and this is a hardship they can not well bear. So that, it seems to me, it all resolves itself into a condition where it is quite necessary that Congress should understand the situation, and it should be presented in the strongest possible way. The chairman of the committee having the matter in charge should, I think, be the Director of the National Bureau of Standards. Mr. Fischer, who is head of the Division of Weights and Measures of the National Bureau of Standards, should be a member. The others should be selected by these two gentlemen because of their familiarity with this question. Conditions all over the country are about the same; in many articles needed for living purposes the people are being defrauded out of what rightfully belongs to them by short weight and measure. When the proper time comes I will be glad to offer a motion for the appointment of such a committee.

Mr. REICHMANN. I want to accuse Mr. Haskell of being over modest, if that accusation is not out of place. Most of the gentlemen who are here to-day paid Mr. Haskell a visit to his quarters a year or two ago. We went up some ramshackle stairs and reached a dingy looking place which he described as his office. If you will go to see Mr. Haskell now in the new municipal building of the District of Columbia you will see the finest weights and measures office in the United States. I am giving you an opportunity to invite us, Mr. Haskell.

Mr. HASKELL. I cordially invite you to inspect our new headquarters. I will be pleased to have you make that your headquarters for any business you may wish to attend to while in the city. I am pleased to invite you to come and see us now, because we feel that we are in a position to properly care for and receive you, and you certainly will be welcome.

The ACTING CHAIRMAN. I will ask Mr. Hazen, of St. Johnsbury, Vt., to report to us on the conditions of weights and measures in the State of Vermont.

Mr. HAZEN. When it was announced in the state papers that the governor had appointed a delegate to this conference, the Rutland Herald came out with an item to the effect that if their delegate would carry through a provision whereby a pint measure could be made to hold a quart they thought he would fulfill his mission. That is about the only mission that was given me. The laws in Vermont, I think, are very much on a par with conditions found by the old Vermont Yankee who at one time was a curb broker in New York, but unfortunately for him he was there on "Black Friday," and as a consequence was obliged to go back to Vermont and take up farming. Afterwards, he had occasion to visit his old stamping grounds in New York. It was in the early days of the automobile, and after he got home some of his friends in asking him about his experiences (they called him by the familiar name of Orville) said, "Orville, did you ride in one of those horseless carriages?" He replied, "No, I didn't; but I drank some of that cowless milk." I think our Vermont laws are very much on a par with that cowless milk which Orville drank in the city of New York.

The laws of Vermont to-day are about the same as they were when these conferences began three years ago, and provide substantially as follows: That the state treasurer is the custodian of the State's weights and measures, which are stored in the statehouse at Montpelier; that each county treasurer shall have a set of weights and measures and shall keep the same in repair; in case of his neglect to do so, he shall be fined \$1 for each month of such neglect. I expect that if some of these county treasurers were looked up it would be found that their salaries would be badly cut into in paying the fines. It is also provided that the town treasurer shall have a set of weights and measures, and that he shall seal and test any weights, measures, or scales brought to him and shall receive as compensation the munificent sum of 10 cents for each test.

I think that this conference should have been attended by the state treasurer instead of myself, and I visited him in his office a few weeks ago and strongly urged him to do so. There was no appropriation for the expenses, however, and although I requested him to ask for it from the legislature, which is now in session, so that he might be able to come, he didn't quite have the nerve to do it.

I was not present last year, and therefore was not cognizant of the fact that a model law had been suggested. Mr. Fischer has promised me copies of it, and upon my return home I intend to place copies in the hands of the governor and of the state treasurer, and while it may be pretty late at this session of the legislature, which meets once in every two years, to have any action taken, I am quite sure that two years hence there will be positive action taken in the State of Vermont upon that subject.

I am very much interested in this work, and I want to add to what Captain Pettis has said with reference to the Journal of Weights and Measures. The publication is one which I am glad to see started, and I think that it is worthy of a very large subscription list; I hope it will be taken and kept on file throughout the length and breadth of the land. I believe it is an avenue by means of which this subject will be agitated a great deal. I am sure that much good has emanated from these conferences since their inauguration three years ago, and a great deal of credit is due to Doctor Stratton and Mr. Fischer, and such men as Captain Pettis, Mr. Palmer, Doctor Reichmann, and others, for all the work they have put into it. I have seen the results of it, and am looking for still greater results.

This state treasurer said to me: "The first thing I will have to do is to write to every county treasurer in order to find out whether he had his weights and measures tested, and, incidentally, to remind him that there is a little fine in case he neglects it." You can see that the ball has commenced to roll in Vermont. I am fully in sympathy with getting before Congress some national legislation which will govern state and municipal legislation, and I think that we shall see uniform legislation throughout the United States in the course of time.

The ACTING CHAIRMAN. It is extremely gratifying to find that Mr. Hazen is confident that the State of Vermont will do something. I know that they need it very badly in that section. We have towns on the adjoining state lines, and every day we hear of some complaint from one of these border towns of the State where the measures or scales tested in the majority of instances do not comply with the requirements of the State of Massachusetts, and are shipped over the border into this State, which has no inspection service. That is one of the arguments which we attempted to bring to bear on the governor of Connecticut in order that we might have a representative from that State.

Connecticut adjoins Massachusetts and Rhode Island, both of which have more or less efficient inspection services. From my own personal observation and knowledge I know that thousands of short milk jars are dumped over the border into Connecticut towns. You can probably realize what the loss is to the purchasing public of the State of Connecticut alone.

The next State on the list is Kentucky, from which the Hon. B. S. Bruner, secretary of state, was appointed delegate. On account of his being unable to attend, his brother was to represent him. I understand he has been here, but had to leave; but will be here tomorrow, so we will probably hear a word from the Blue Grass State then.

The next State is Michigan, and I know we all miss having Mr. Haarer with us. He was one of the most enthusiastic delegates we

had from the western part of the country, and I had the pleasure of being with him several days after the conference. I know that he has the welfare of this work at heart, and I believe they are doing much good out there in his State. I think Mr. Fischer may tell you later what has been done.

Next on the list is the State of Utah, which appointed the Hon. O. J. Salisbury to represent it, but he is not present.

Mr. REICHMANN. I understand that a great deal is being done in weights and measures work in the State of Utah, particularly in Salt Lake City. The sealer of weights and measures there is also the inspector of flour and food. He is doing a great deal of work.

The ACTING CHAIRMAN. It is unfortunate that Utah has no representative here. We like to hear from all the States which are taking up this work. I know you get tired hearing of the work that is being done in Rhode Island, New York, and Massachusetts. It would be exceedingly interesting to hear from some other States.

Mr. PETTIS. I believe a large amount of work is being done in New Mexico. I think that a man has been selected to take charge of the work, and some of the towns have appointed sealers.

The ACTING CHAIRMAN. The next State is that of Kansas, represented by Mr. Edward E. Brown, of Lawrence, Kans., who will give us a word from that State.

Mr. BROWN. By law the chancellor of the University of Kansas is the state sealer of weights and measures. He is very much interested in this work, and desired that I represent him at this meeting. The State thus far has no systematic inspection of weights and measures used in trade. The law provides that the clerk of each county shall be the sealer for that county, and in order to get an idea of how many counties were provided with equipment we sent out a circular letter on the 1st of December, requesting answers to certain questions. I have here a summary of answers received from 81 counties out of 105. The first question asked was, "What standards of weights, measures, and balances are owned by your county? Give detailed list. Please indicate their present condition." Out of 81 counties, 52 reported that they had no such weights or measures; 9 reported a full set (I do not know of what these full sets consist); 14 reported part of a set; 5 reported a few weights only; and 2 reported 1 weight only. The second question asked was, "How many times have you been called upon during your term of office to test weights, measures, or balances?" Fifty-nine counties replied "None;" and 22 counties reported once or more. The third question asked was, "In your opinion what would be the attitude of the people in your county toward a law establishing a department of public inspection and testing of weights and measures?" Fifty-five counties reported favorably; 8 unfavorably; 16 did not know;

and 2 gave no expression at all. The last question upon which we desired information was, "Would you be willing to attend a meeting of the county clerks of the State (who are also by law the county sealers), at some time in the near future, at Topeka, or here at the university during the holidays, to discuss the situation in regard to weights and measures?" Thirty-five reported that they would be glad to do so; 26 replied "No" (17 of these because their terms expired shortly); 11 reported that they would be glad to come if their expenses were paid; 6 suggested that the matter come up for discussion at the meeting of the county clerks and county commissioners at Hutchinson, which occurred on the 15th of December just passed; and 3 gave no answer.

It was thought desirable to have a man represent the state sealer at the meeting at Hutchinson, and we therefore sent Prof. E. F. Stimpson, of the department of physics and electrical engineering, who has been taking an active interest in this work and who is practically the deputy of the state sealer. I have not heard from him as to the result of that meeting, as it was held only a few days ago. The state board of health also intended to send a representative.

During the past few months this matter of weights and measures has been brought before the public to some extent by the inspectors of foods and drugs, and it is attracting the attention of the people at this time more than at any time heretofore.

As to our equipment, the standards which are now at the university were received many years ago, and I do not think that they have ever been returned to the Bureau of Standards for test and verification. I considered that it would be desirable to know in what shape they are at the present time, and after deciding to make this trip I concluded to have them shipped to the Bureau of Standards to be examined and, if possible, tested. At the last session of the legislature we requested an appropriation to cover additional equipment. An appropriation of \$3,200 was made, and we are now in a position to have the best standards and a proper place to keep them.

The laws of the State are not very complete on the subject of weights and measures, and we are considering making certain recommendations to the legislature at this coming session. I think that the State is ready for something of this kind. Some of the expressions in regard to this matter given by the county clerks were quite interesting. I am sure this is a matter that the Kansas people will take hold of very quickly when it is once stirred up, and we are looking to the Bureau of Standards for suggestions as to a model bill to put before the legislature. I doubt, however, if the State is up to that point where much inspection can be made at this time unless it is in general with the state board of health in connection with the inspection of pure foods and drugs. There is a great deal of

that work being done. The testing of drugs and foods is done at the laboratories of the university, and the inspectors are inclined to branch out into weights and measures work. Quite recently one of the inspectors in our home town of Lawrence made a trip among the grocers and bought about 15 packages of potatoes, ordering a peck in each case. These were delivered to the university and tested by our standards, and only 2 were found to be correct, and we afterwards learned that these 2 dealers were aware of the fact that an inspector was buying the potatoes. All the others were from 4 ounces to 3 pounds 8 ounces short. If I remember rightly, 3 packages weighed less than 12 pounds each. So you see we have no protection from improper weighing and defective and fraudulent weights and measures.

The CHAIRMAN. We will next hear from Mr. A. E. Bent, state treasurer of the State of Colorado.

MR. BENT. Mr. Chairman and gentlemen, this is my second opportunity to meet with you, and it will probably be my last, for the constitution of my State requires that the treasurer of the State (who is also the custodian of the state standards) shall not succeed himself; but before bidding farewell to this organization I wish to say a few words.

I found the set of state standards about eighteen months ago stored in a subbasement of the capitol building. They had been there some thirty-odd years without being opened so far as I could discover. We are laboring under the same conditions as the old State of Vermont, I imagine—that of lethargy to our own interests and the interests of the people on the subject of weights and measures. Colorado passed various laws many years ago providing for the securing of a set of standards by the state treasurer and even making it imperative that he secure from the Federal Government a set of standards. It was also provided that the standards of the United States Government be the standards of Colorado. It was also made obligatory upon the county commissioners throughout the State to procure a set of standards for each county and appoint a county sealer. But they seem to overlook the fact that it is necessary to have a uniform bill in order to have it at all effective. There is no state sealer or commissioner of weights and measures. The only connection the office of the treasurer has with this subject is that he is the custodian of the standards. He is not directed even to permit anyone to check up with those standards. It does seem to me that the question of weights and measures in this country is second only to that of pure food, and the same sentiment on the part of the great American public that very recently demanded from Congress and many of the States pure food laws is the sentiment that will

take advantage of the work of this organization, together with the able cooperation of the Bureau of Standards.

It does seem to me that the little journal which has been started by this organization, and the gentlemen who edit it, should receive the strong support of the organization, and it should be made a medium through which the public may be educated to the great importance of this question. If nothing more could be accomplished by this organization than to give publicity to (and, mind you, the people take up these questions very rapidly nowadays), and to show in detail the various and many specific instances that have been met by the active commissioners of weights and measures in the States of New York, Massachusetts, and Rhode Island, together with the experiences of the sealer of the District of Columbia, I believe that alone would be a sufficient basis upon which to demand and receive from Congress and the state legislatures absolute protection to the people through laws resulting from such publicity.

The auditor of our State and the commissioner of insurance came in contact with a new line of insurance legislation resulting from the recent agitation started in the State of New York over the handling of our great insurance companies, and it was my observation at that time that national legislation, while ideal, I believe, was regarded by the legislators of many States, in fact, probably by the great majority of the States, as an encroachment upon States' rights.

Whether national legislation upon this important question might be so regarded is a question in my mind; I doubt it, but the result, as you all know, of the request for national legislation with reference to insurance companies and the insurance business, has not seemed to have been regarded favorably. However, on the other hand, state legislation has been rampant and voluminous and of much good to the public. If it is possible to secure from Congress the desired legislation that is certainly the ideal method, but in the meantime it devolves upon you gentlemen who will from year to year meet here together to maintain this organization; and as a mere suggestion from one who will probably never meet with you again I might say that a provision for a nominal appropriation by the legislatures to the proper department or official in each State to defray the expenses of representation here, and the urging on the part of the present active membership of this organization and those who will be here from year to year that each State send a representative to these annual meetings will serve as a great distributor of the important facts which the Bureau of Standards and your organization desire to get before the people. The appropriations by the legislatures are the first elements necessary to insure a good attendance, and that is what you ought to have, because that distributes and makes public in all of the States the importance of this work. I think it is an extremely impor-

tant work. It is no short task; it will take a great many years to get anything like ideal results. There are many elements in Congress, you will find, that will oppose, restrict, and impair the ideal results; but there is, on the other hand, the great public at large which is now being listened to more intently and with greater care by the public servants than perhaps at any other time in the history of the country; and this publicity emanating through the cooperation that now exists between this organization and the Bureau of Standards, together with the little Journal of Weights and Measures will, I think, bring about the desired results in time.

It is very gratifying to me, representing a State which though young and small in population is a heavy purchaser of the products of the great manufacturing States of the East, to observe the active organizations in the States of New York and Massachusetts, for instance. The active organizations in those States will assure to their people and to the people of every State in the Union that the time is not far distant when the public will be able to buy almost all commodities by standard measurement or by standard package; and, as Mr. Pettis has so clearly outlined in his little story of the woman who paid \$19 and some odd cents for a \$5 ton of coal, such conditions will not last very much longer in this country. I believe the great manufacturing concerns of this country are unwilling victims and participants, in the main, in this irregular method of manufacturing nonstandard packages of every description, and the tendency, as so well described by Mr. Haskell, is to grow in the production of that character of output simply because the great American public has not yet awakened fully to demand and receive from proper sources the protection to which it is entitled. I say "unwilling victims," because I think that is shown in a little circumstance coming under my personal observation, which I will relate to you.

Some years ago in disposing of a large quantity of baled hay in our State it was necessary to contract with a man to bale the hay and also to contract with jobbers for the sale of carloads of the hay. This product was sold by the ton, baled in certain sized bales. Everyone knows that the ordinary bale of hay used years ago weighed 100 pounds, while to-day it runs from 65 to 70 pounds. At least that is what it weighs now in our section of the country, and I think if you will weigh your bales in the East you will find there is little variation from these figures. I say we were unwilling victims to this "graft," as it were, but in order to sell our product we were obliged by the jobber in hay to put it up in bales not exceeding 80 to 85 pounds in weight as the maximum. A year or two later it fell to about 75 or 80 pounds; and ultimately about 75 pounds was the maximum. It matters not to the producer whether a bale of hay be 75 or 100 pounds, but the jobber was forced to demand a small bale from the producer

to satisfy his retail merchants all over the country. Therefore, you see that the jobber and the producer and the man who bales the hay are all unwilling contributors to this result. In fact, it is brought about by the desire on the part of some merchants to sell the public a "package." We have drifted absolutely from any standard on all our great commodities in this country. That is why I appreciate so deeply the work of this organization.

I will say to my friend from Iowa that if he can find a 100-pound bale of hay in the State of Iowa I will give him \$20 for it. The same offer holds good for any other State in the Union; that is, unless it is especially baled to sell to me.

The internal commerce between the States of this Union is greater than all the commerce of the rest of the world; and when we think of it that fact alone should justify us in exerting a special effort to look after our commerce. But the custom of this country has drifted into handing each other "packages," and the work of this organization is to break up that practice. The organization is extremely fortunate in having the able assistance of the Bureau of Standards, for which we have such high esteem; and it is gratifying to know that Congress makes appropriations for the Bureau to carry on its work.

It is also gratifying to see that Congress has seen fit to provide in the city of Washington such beautiful quarters for the sealer of weights and measures. I think, from what I have heard on various occasions, that the conditions in this city ultimately will be, if they are not now, a model for this country to follow along the lines of weights and measures and standard packages.

The great American public is spending millions of dollars annually that it should not be required to pay for the goods it buys, just as, for instance, that poor woman who paid \$19 a ton for coal. The percentage of overcharge is not so high in all cases, but I venture to say that it runs from 10 to 20 per cent. That is the excess amount the public pays for the common commodities, and for which it fails to receive value, due to the lack of standard packages alone. I believe there is a greater loss to the people due to the lack of standard packages than to the lack of proper scales and the inspection of weights and measures.

Mr. HASKELL. I do not think your statement is exaggerated at all.

Mr. BENT. I am very glad to have you say that.

It is that feature of this great work that appeals to me, the standard package. Coal in carload lots is sold and weighed by the public weighmaster or the assistant weighmasters employed by railroad companies, so that the carload consumers seem to get a square deal on the weight; but it is not so with the people who get the ultimate

distribution from the retailer. I would not presume to charge any retailer with deliberately robbing the people. I believe the people of Colorado are like all other people in the country; likewise I believe the people of Massachusetts and New York are just as good as they are in our State, but the nefarious methods demonstrated by the evidence produced here on the part of the inspectors in New York, Massachusetts, and Rhode Island, and even in the city of Washington, leads me to believe that we all need this protection, and the question is how to get it. I believe publicity would be a great factor in inducing the people to go to the polls and demand this protection. In Congress is the proper place to take this up, but in order to get what we desire from Congress the people must be educated, and that takes time. Therefore, I believe this movement for uniform state laws to be the essential thing to do at the present time. I believe it will come nearest to giving us quick relief. However, if appropriate effort is put forth in educating the people, it is possible that Congress might relieve us much quicker than state laws. In any event, state laws will ultimately be passed in the various States; and it seems to me that before this organization adjourns this time action should be taken upon the suggestion, which is a good one, that a very strong committee put this matter before Congress at once. I think now is the time to push it with a view to getting results. Our State has had no legislative session since our last conference here. A session will be held this winter, and I have already recommended in my annual report to the governor, and urged, the passage of a law, in conformity with the suggestions of this organization and the Bureau of Standards, to create state supervision of weights and measures. It does seem to me that every State in the Union is equally interested. It matters not whether your constituents are tradesmen, manufacturers, farmers, or miners; they are all equally interested as great consumers of commodities manufactured all over the country. They are very much alike in trade, and one class is about as good as another.

I hope this organization will not adjourn until something tangible, definite, and forceful is effected. I thank you, gentlemen.

Mr. HAZEN. Mr. Chairman, I am not sure that I understood the gentleman from Colorado, but, not to provoke discussion, I would like to ask him a question if he will permit. I understood him to say that a law by the States rather than national legislation would be more effective, citing as an instance that the national insurance laws requested were not very successful.

Mr. BENT. I put that, as I remember, this way, that my observation in connection with the body of insurance commissioners of this country during the insurance agitation was to the effect that the consensus of opinion of the representatives of practically every State

in the Union in insurance matters was that state laws were more desirable and much easier to secure. As you all know, state regulation of insurance seems to have been the trend which that matter took, in many States following in the main the government law.

Whether or not this weights and measures matter would take such a course is a question in my mind. Many of you gentlemen here are better judges of that than I am. I related the insurance matter merely as an instance to show the trend in the various States and state legislatures. In other words, when the commissioners of insurance assembled at various times to discuss the question of national legislation, the great majority were very fearful that the legislatures of the various States would decline to recognize or aid by cooperating along the lines of a general national law. Their idea was that the state legislatures should pass laws for themselves, but in conformity with the general outline.

The question of weights and measures in many ways is different. I believe it is along the lines of the pure-food question. It should be easy to educate the American public to such a frame of mind that it will demand from Congress a law fully as effective as the pure-food law for weights and measures. Therefore it is an open question as to which is the better course, but either or both will do no harm at the present time.

Mr. HAZEN. It seems to me that this is along the lines of the pure-food laws and the insurance laws. Take Vermont, for instance. Vermont is regarded as a rural State. Probably most of you will be surprised to know that the value of its manufactured products far exceeds the value of its agricultural products. Its products are shipped from Maine to California. Therefore the question of weights and measures is an interstate one, and any federal law that will have jurisdiction over interstate distribution of the products of any State will be more in line with the pure-food law. Federal legislation would be a guide for State legislation. The States do not know what laws are needed; they do not know what the people ought to have; but by having something formulated by Congress, and then have the States enact laws along the same lines, this question will be handled in a proper manner. That was my idea from the outset.

Mr. HASKELL. I wish to say a word with reference to what was said a few moments ago in regard to shipping from one State to another. We had that illustrated here less than a year ago. There was a car-load of milk bottles which we rejected here, and the remark was made that they would be shipped to some Western State. I do not want to discredit the State, but I think Iowa was the State to which they were to be shipped.

I wish to speak of another matter. We pay 5 cents for a package of crackers. That does not seem very much, but when we figure it out

we find that we are paying at least 16 cents a pound for crackers that we can buy anywhere in bulk for 10 cents. That is where the people are imposed upon, and largely because of a custom.

The ACTING CHAIRMAN. I think we all appreciate one very strong point brought out by Mr. Bent, and that is possible interference with States' rights. I do not think that ought to scare us, however, as that is a question bound to come up in every matter of this kind. I believe with careful consideration of a measure on the part of the members of this organization before presenting it to Congress the congressional committee would safeguard the States so that there would be no danger of antagonism coming from that quarter. I believe it is a good point, though, and one of the very important ones we have to consider.

The State of Pennsylvania is represented by Mr. J. Sutton Wall, of the department of internal affairs. I will ask him to tell us of conditions in Pennsylvania.

Mr. WALL. Mr. Chairman, I made a report in detail to the last conference. Since then we have made practically no progress—very little, at least, on legislative lines. At the last session of the legislature we had a bill introduced in the senate, which passed that body with very little objection. It was amended in some respects. But this bill got hung up because it went to the house on the last day of the session with some 60 or 70 other bills and the House failed to concur in it. I understand there is talk of introducing that bill again, and we will try to get it through.

I think you will pretty well understand the difficulties that we have to encounter on account of our peculiar state constitution. I might refer to my report given at the last conference for the benefit of those who have not had that report. I will preface that by saying that prior to the adoption of our present constitution, in 1873, we had state inspection under the act of 1834, but, as Doctor Reichmann said of New York City, it became a little obnoxious. The merchants thought they were being imposed upon, because it was a fee system of inspection and paid for by them. We had county, municipal, and city inspectors, and so forth. When the constitutional convention met in Philadelphia in the winter of 1872-73 the Merchants' Exchange of Philadelphia petitioned the convention not to incorporate anything in the constitution along those lines. That was also the sentiment of Pittsburg and other large trade centers. There was pronounced opposition to any provision creating state officers for the inspection of weights and measures or merchandise. The persistence of this opposition led to the adoption of a peculiar clause in the constitution, section 27 of article 3, which is still in force. This section reads: "That no state office shall be continued or created for the inspection or measuring of any merchandise, manufacture, or

commodity, but any county or municipality may appoint such officers when authorized by law."

In Pittsburg and other cities we have had local inspection through ordinances passed by the councils under the act of 1834, which was not repealed in toto.

An act was passed June 26, 1895, which appears to have been an attempt to restore that part of the government; that is, the appointing power in cities of the first and second class. Under a subsequent act of April 11, 1903, appropriating the sum of \$2,500 to purchase standards of weights and measures to carry into effect the act of June 26, 1895, several cities of the first and second class applied to the department of internal affairs for the equipment, and Secretary Brown made inquiry of manufacturers to learn what the complete equipment would cost. From the prices quoted he discovered that he could not furnish an equipment for each of these twelve cities of the first and second class for the sum appropriated, so he declined to take any further action in the matter on the ground that the appropriation was totally inadequate to purchase the proposed equipment, and that the act was in violation of section 3 of article 3 of the constitution. Inquiry was made at that time, and we learned that the National Government would not furnish a second set of standards free of charge, but would do so if payment was made. Under the act of 1834 we could not buy new standards without a special appropriation by the legislature.

Mr. REICHMANN. From speaking to Mr. Brown about the matter two years ago, I understand your constitution abolished all offices of inspection of merchandise. Does it say anything specifically about weights and measures?

Mr. WALL. Section 27 of article 3, which I have just quoted, is all there is on the subject.

Mr. REICHMANN. At the time that was passed the State of Pennsylvania had no superintendent of weights and measures. That act applied only to merchandise, etc. Can they not appoint, under the constitution, a sealer of weights and measures, and give him duties which do not apply to the inspection of merchandise?

Mr. WALL. Perhaps it can be done.

Mr. REICHMANN. I went over that with Mr. Brown two years ago when he was down here. I do not think your constitution prevents you from acting. The point I make is that although you have abolished all the offices of inspectors, the act does not contemplate, nor did the framers of the constitution contemplate, abolishing anything that served to give the people honest weights and measures. With us, it did away with a number of unnecessary offices and combined them into one.

The CHAIRMAN. Do you know just what the condition of the state standards is?

Mr. WALL. Yes; they were mutilated and partly destroyed. It is just what would happen in a building burned from top to bottom. The standards were in the basement of the capitol when it burned. Timbers fell upon them, and some of them were melted. I saw some of the pieces.

The CHAIRMAN. I think probably there are certain pieces of apparatus that could be furnished from here. Have we not some of them left, Mr. Fischer?

Mr. FISCHER. Yes; but I think the best thing to do would be to buy a new set.

Mr. WALL. There are some parts preserved yet, I think.

Mr. FISCHER. We have always considered that the standards of Pennsylvania had been destroyed. It was so reported to us.

The CHAIRMAN. If the set is not too badly damaged, we might put some of the pieces in order, as we have a few extra pieces we could supply.

Mr. WELD. Was there not some action taken at the time the National Government furnished them to the State, guaranteeing that they would be taken care of?

Mr. WALL. Our state law provides that they shall be taken care of. The secretary of state is charged with their safekeeping.

The CHAIRMAN. We will be glad to help you as far as we can. I can not say positively that we can furnish all the pieces, but we will loan what we can until the State of Pennsylvania can afford to buy a new set. I think we can loan almost a complete set.

Mr. WALL. We had better have some good legislation so that we can use them.

Mr. FISCHER. Yes; that is the idea.

Mr. REICHMANN. What is the use of having the standards if we have not the legislation so that use can be made of them?

Mr. WALL. I think if we had our laws in proper condition we would have no trouble about getting a set of standards.

The CHAIRMAN. I was simply thinking of providing the means of getting around Mr. Brown's objections. One of the reasons advanced was that Pennsylvania could not do anything because the standards were not in proper condition. I was trying to remove that objection.

Mr. WALL. There is one point, and that is, that the \$2,500, according to the estimates we obtained, would not furnish 12 complete sets, leaving out those for the city of Philadelphia. If we could furnish these 12 cities with standards, then Philadelphia would require fully 12 sets or more, perhaps 18. That is what Mr. Brown had in mind. The appropriation was inadequate to carry out the provisions of the act.

The ACTING CHAIRMAN (Mr. PALMER). Has Philadelphia taken no action whatever in this matter? I know they bought some standards. They have a new set of standards.

Mr. WALL. They have not taken any action through the state department. They are doing that themselves.

Mr. REICHMANN. I get newspaper clippings from all over the United States, and I notice, by the increased number I have to pay for, the great interest that is being taken by the newspapers in honest weights and measures. A year and a half ago my monthly bill for newspaper clippings did not run over \$8 to \$10; now it runs from \$18 to \$20. As I understand it, when Greater Pittsburg was formed, the city of Allegheny had a sealer of weights and measures, but the city of Pittsburg did not. Pittsburg had only an inspector of oil, a "gauger of oil," as they called him. When they formed the city of Greater Pittsburg the question was whether they would have a sealer of weights and measures, and I believe they have not at present. I understand there is an inspector at the North Side Market, who has done very efficient work within the confines of the market, where everything has to be sealed, except in the rows. This condition is, of course, an advantage to the peddlers outside, because they do not have to have their weights and measures sealed. The matter is now being taken care of by a committee of the Chamber of Commerce in Pittsburg.

Mr. WALL. The conditions are bad; they are bad enough in Harrisburg.

Mr. REICHMANN. In Philadelphia there is no sealer of weights and measures. The matter is under the control of the police department, and anyone who wishes can go to the police department and have his weights and measures tested.

Mr. WALL. I do not think there is anything to prevent the municipality, through its council, from attending to this.

Mr. REICHMANN. They can have a good system of inspection in theory.

The ACTING CHAIRMAN. I believe we have a new delegate from Illinois this year, Mr. Harrington Clanahan. We would be glad to hear his report on that State.

Mr. CLANAHAN. In the State of Illinois the secretary of state is the custodian of the standards of weights and measures. He has in his possession, and in good condition, the standards furnished many years ago by the United States.

All standards in Illinois must conform to those in the custody of the secretary of state. But the secretary of state has no authority to inspect scales and no authority to test weights and measures for the public, his only power or duty being to try and prove such

weights and measures as may be brought to him by the county clerks of the various counties.

The county clerks are required by law to keep standards which have been tested by the secretary of state, and to test all weights and measures brought to them for that purpose. But this law in Illinois is a dead letter in most counties, the county boards having neglected to appropriate the money necessary to pay for these standards. I have been connected with the office of secretary of state for twelve years in the capacity of chief clerk, but can recall only three instances where the department has been called upon to test weights or measures.

The matter of testing scales so far as the same has received public attention at all has been by officers appointed by ordinances of the various towns and cities. Except in the larger cities, I understand that little or no attention is paid to the correctness of scales.

Recently a great deal has been done in Illinois toward protecting purchasers in the matter of the quality of goods bought, but I understand that little attention has been paid to the question as to whether or not full weight and measure are given. In the coal-mining industry and in the handling of grain at the elevators, the matter of correct weights is amply taken care of by officials appointed for that purpose, but the general public is left to the tender mercies of the meat man and the grocery man.

I have heard of no agitation in Illinois on the subject of requiring the druggist or the grocery man to put into the package he sells the full amount which the package purports to contain. So far as I know the pound package of rolled oats contains the full 16 ounces and the ounce of quinine its full measure of grains. I would not be surprised, however, if an officer appointed by state authority could find extensive frauds practiced in our own State the same as in the good State of Colorado and the States farther east. Many of our people are Yankees or descendants of Yankees, and our good friends Captain Pettis, from Rhode Island, and Mr. Palmer, from Massachusetts, might find the people of Illinois quite as cunning in making a pound out of 14 ounces as the Yankee is reputed to be. I have heard that the farmers of Illinois are wise to the trick reported by our friend from Colorado, of putting only 80 pounds instead of 100 in a bale of hay.

I understand that this is a kind of experience meeting. The facts and figures as given here have opened my eyes. I should be glad if the information that has been imparted here to-day could be sent out among the people so that they could learn of these conditions. The great thing needed is more laws in relation to inspection. It seems to me that the arrangements for securing standards are ample, but that the laws we find, in relation to all the States, are, in the

language of a distinguished citizen, lately deceased, in the state of "innocuous desuetude." I mean the lack of some means of inspection. It seems to me that is what we need.

In Illinois we have provided amply for protection as to the purity of the food we use, but the poor people, of which we have a large number in all the great cities—Chicago, Peoria, Quincy, and others—are absolutely without protection as to the amounts which they receive when making purchases. I am impressed with the idea that the purchaser should not only be assured that what he buys is suitable for food, but that he is getting the full amount that he pays for. If our laws are weak in any respect, it is in the matter of inspection. That is what this meeting has impressed upon me. Inspection is what we need; something that will look after the interests of these poor people. Of course, our laws now provide that we can go into court and make complaint and prosecute the matter, but it seems to me that our Government at least ought to be paternal enough, that it will go far enough, to see that people get the right weights, and that the scales are correct.

I am hoping that the gentleman from Colorado, although he is making his farewell address, will be able to go from that mountain city, Denver, to the other end of the big capitol building, and there infuse into the body of senators some of the enthusiasm that he has imparted to this assembly here to-day.

The ACTING CHAIRMAN. That, I believe, closes the list of States we had represented. I will ask Doctor Stratton to take the chair again, because he is more familiar with the programme we have outlined.

The CHAIRMAN. It is planned to make the question of national legislation the order of business to-morrow morning. Is there anything else you wish to take up this evening?

Mr. PETTIS. I want to say one word more, if you please. I am delighted with the reports we have received from our delegates. They show that we are making material progress in this matter. I hope it will continue.

Mr. PALMER. I would simply like to say this: I trust all the delegates will be here to-morrow, as I think to-morrow's business will be by far the most important day's business we have had at our conferences. I know you will be very much impressed with the laws which the subcommittee has to offer. The subcommittee has been in touch with about 150 different associations throughout the country, in some cases representing two or three hundred of the principal merchants of the country. One of the delegates spoke of hay here to-day. We have a very strong letter from the National Hay Association on this matter. The National Food and Products Commission Merchants and other bodies, such as refrigerating associations, all inform us that they believe in uniform weights and measures. They say, "We

are ready to stand by you in anything you want to do or lay before the Congress." I believe this conference should in some way, inadequate though it may be, give expression to the fact that it would like Congress to do something along the lines of weights and measures. If we leave this matter for any extensive length of time it will lose force. It should be taken up this time. We have deliberated this thing for some time and now we ought to be prepared to do something definite regarding the legislation we desire. The details can be left until later. No matter what we may do in the line of legislation, we are going to make some mistakes. Of course, we want safe and certain legislation, but undoubtedly mistakes will occur. That has been true of every other legislative question taken up in the country. It is a simple matter to have the details changed afterwards. But now we should be prepared to make some kind of a start if we are going to accomplish anything in twelve months, or even twenty-four months. It is going to take several years; and, as one of the delegates has before stated, we will be prepared to get together and formulate what we think we will do in detail. Let us appoint our committee and let the committee go ahead and work out some of the details for the body.

Mr. WALL. That is right. I thoroughly agree with Mr. Palmer in what he says. I am only sorry that national legislation has not already been undertaken. If there were national legislation on the subject, Pennsylvania would have framed an act after the national law and in harmony with it. We did not know when we introduced that bill in our State whether it would conform with what this association will recommend, because we may have to preserve what we call the State's rights. But, in my opinion, it will do no harm for the States to pass acts conforming to the acts of Congress, though perhaps carried out more in detail than would be in a general act of Congress.

The CHAIRMAN. I am sure that is true. I think that question is no longer debatable. We ought to get something under way; but it is a question of what to get, and we will spend to-morrow in discussing that. I might explain what has not been done along that line and offer some suggestions that have come to us, but I think we had better reserve them until to-morrow morning. The case is not as difficult as it might seem.

A motion to adjourn until 10 o'clock to-morrow morning was seconded and carried.

THIRD SESSION (MORNING OF FRIDAY, DECEMBER 18, 1908).

The meeting was called to order at 10.30 o'clock a. m. by the chairman.

The CHAIRMAN. I think we have come to the most important object of the meeting, the discussion of proposed national legislation. Perhaps at the outset I should state what has been done along this line.

A year ago those of us at the Bureau who had talked with the different members of Congress and with our legal advisers concluded that it would be almost impossible to get through a national law such as we would like, and at the last meeting a method was suggested whereby each State was encouraged to enact uniform legislation. For a long time I felt much in favor of that, as being the only way we could get in an entering wedge, but during the year, in talking with Mr. Smith, Chief of the Bureau of Corporations, and Mr. Earl, the solicitor of the department, two of the best lawyers in the service, they both advised very strongly against the method proposed. I refer only to the first few paragraphs of the proposed national law. The advice of these gentlemen and also the members of Congress with whom I have talked is that it would be unwise for us to go before Congress with such a measure as this. They say they want a matter in definite form; they want definite points to consider, and I am positively sure that the paragraph in relation to packages (the things we have made provisory here) must be taken out and considered as a separate measure.

The proposed local law has been taken up by the Bureau and recommended to at least three or four different States in the last year. We are having many inquiries in regard to it. Quite a few States are working and planning to adopt something along that line.

I am encouraged as to the possibility of getting through a national law, a simple mandatory law, in regard to the fraudulent use of weights and measures. We have found a number of precedents in the government service, notably in the navigation laws and in the steamboat-inspection laws, where mandatory laws exist. The question that is going to come up in Congress is this: How do you propose to carry out the law? That, of course, is vital. It is the opinion of our legal advisers and others I have talked with that it is possible to devise a plan whereby the General Government can cooperate with the States. A compulsory law will be an absolute failure unless backed up by the States. I know it will be supported by the

States so far as enacting their own laws is concerned. That is not the point, however. Suppose Congress enacts a law making it a misdemeanor to use fraudulent weights and measures and providing a penalty for its violation. Then all cases must be tried in a United States court. The question as to how we can penalize the fraudulent use of weights and measures in an effective manner is very puzzling, yet I think it can be worked out by the General Government cooperating with the state governments—that is, by deputizing state officials—or by the States enacting laws themselves, which is, in effect, the same thing. It is a matter that must be very carefully thought out.

That will not prevent us from formulating at least two sharp, definite measures—one requiring the net weight of contents to be shown on the packages and another making it a misdemeanor to use fraudulent weights and measures. I suggest, if you agree to introduce separately two such measures, that you draw them up this morning and have them introduced immediately. You have had enough experience in connection with the handling of packages to draw up such a bill.

Mr. PETTIS. I believe we ought to get a commissioner of weights and measures appointed in every State and get a movement started in that direction before we get to work on this package business.

The CHAIRMAN. Mr. Pettis, we assume that that is to be done. We are asking for an appropriation to go out and make an investigation in the different States, and the principal object of that appropriation is that the Bureau may assist in getting all the States started in this work. Those two things do not conflict.

Mr. REICHMANN. In order to bring this question before the conference, I would like to introduce three resolutions. I think it would be a waste of time to go over these bills here, because we have gone over and taken them up step by step. We have agreed upon them; and the executive committee and the Director of the Bureau of Standards know generally what is desired. It is a legal question at the present time; it is a question that has to be considered by the legal advisers of the Bureau and of the Department, the general outline having been acted upon section by section at the last meeting, in May, 1907—over a year ago. I therefore would like to introduce these three resolutions:

(1) *Resolved*, That the National Conference on Weights and Measures, in session in Washington, D. C., on December 17 and 18, 1908, realizing the enormous number of defectively constructed scales of weight and measures, strongly urges that appropriate legislation be enacted by Congress, making it a misdemeanor to manufacture, use, sell, or offer for sale a type of scale, weight, or measure that had not been proved at a careful investigation by the Bureau of Standards, Department of Commerce and Labor.

(2) *Resolved*, That the National Conference on Weights and Measures, in session in Washington, D. C., on December 17 and 18, 1908, most emphatically urge and indorse legislation by Congress which will secure throughout the United States a clear indication, on the outside of containers, of the net contents thereof, in terms of standard legalized weight or measure, of the commodities put up, sold, or offered for sale in containers.

(3) *Resolved*, That the National Conference on Weights and Measures, in session in Washington, D. C., on December 17 and 18, 1908, request and respectfully urge the Director of the Bureau of Standards to have introduced into Congress the national weights and measures law proposed and acted on by the conference at its meeting in May, 1907, in such a manner as may be proposed by the legal advisers of the Bureau and of the Department of Commerce and Labor, which, in the main, carries out the provisions of the legislation proposed on the above date by the conference. If the Director finds by the 1st of April, 1909, that he is unable to have such measures introduced, to report to the executive committee of the conference, that they may take up the matter; in other words, that they may render such assistance as they may through their Senators and Representatives, or through commercial organizations.

If you are interested in honest weights and measures, you should be willing to assist financially and set up late at night writing to these commercial organizations and getting them interested. There is the primary trouble; a lot of weights and measures work is nothing but talk. What we need at present is action, and I am satisfied that it would be a great detriment if within the next ten months we can not get some legislation before Congress. In the great Empire State we are used to doing things. We want to get right out and do them. Of course, I do not want to interfere with the niceties of custom of Washington and Congress, but it seems to me that these resolutions are reasonable, and we would only lose time by going over the details, section by section, of the measure as it is at present, because it is now simply a legal question.

MR. WALL. This does not interfere in any way, does it, with the investigation to be made by the Bureau of Standards?

MR. REICHMANN. No. As a matter of fact, we want it. I think I have shown by every action that I want to work with the Bureau and help it. This weights and measures proposition is absolutely next to the pure-food proposition, which is a matter of public health and therefore of primary importance. But next to the pure-food bill this is probably of most importance for the commercial interests of the country; also for interstate and foreign commerce. If any of you gentlemen are imbued with the idea that foreign markets take American goods without question as to weight, you will be disgusted and ashamed when you learn the facts. That matter comes up time and again. It is not necessary for me to give you hundreds of illustrations from my experience in New York State. There are questions coming up all the time from the foreign markets because we have no official way of measuring. The producer, the farmer, the packer,

and the commission man have to play both ends of the game. But who finally pays it? The consumer—the gentleman from Iowa, and the gentleman from Colorado, and the people out West. The commission merchants in New York do not pay anything.

The CHAIRMAN. The trouble with Doctor Reichmann is that he represents not only one great Empire State, but two—New York and Texas.

Mr. REICHMANN. I have been a citizen of New York for five years, and anybody who can be a citizen of that State six months and not be imbued with its spirit had better get out.

I would like to make another remark. Two years ago I was in Texas, and told the governor, Mr. Campbell, who is a personal friend of mine, that the condition of weights and measures in respect to retail business in Texas was bad. He said, "I do not doubt it, but what are you doing in New York State? As soon as New York State does something we will follow. The eyes of the South and Southwest are on New York. As soon as you do something there, it will be time for us to do something."

The CHAIRMAN. That is a very common way of turning away criticism.

Mr. THOMAS. I thoroughly favor these resolutions, but before a vote is taken I want to speak concerning the penalty clause, to which the chairman has alluded. I believe I raised this question as to national legislation at the last conference, and at that time expressed the opinion, which I have since seen no reason to change, that a penalty clause accompanying the legislation would prove of the greatest assistance in state work. In Ohio the respect of citizens generally for a United States court is far greater than for a court held by a justice of the peace, or almost any local court. I have no idea that if the penalty clause were included in the national law it would often be called into operation, but for one I should like to see it there. A few cases carried into a United States court would be effective in case it should prove necessary to bolster up state and local enactments in the local courts.

The CHAIRMAN. Mr. Thomas may be interested to know that our Solicitor has almost exactly the same view of it. I feel myself that the penalty in that form is going to be the best thing. However, there is another matter we must take into account, and that is, how we are going to enforce this penalty. On this point I am not quite clear. If it is a United States statute, the case must be tried in a United States court. How are we going to do this without United States officials? The enforcement of the navigation laws is looked after by the Bureau of Navigation, and there is a provision whereby in many instances the informer gets half of the fine. We may be able to utilize state and county officials, but the trial will be in a United

States court and the penalty administered by it. Whether or not there is danger of conflict, I do not know. I am not a legal authority, but we are working on that question.

Mr. WELD. I agree perfectly that if this can be bolstered up by a penalty clause, and the trial carried to a federal court, it will be much more effective than if we have to depend simply on a jury trial by the neighbors of the person tried. How do cases of counterfeiting get before federal courts?

The CHAIRMAN. I suppose usually by the party injured making complaint, and then it comes before the court.

Mr. WELD. It seems to me the way would then be clear for parties injured through the use of false weights and measures to obtain redress, if they called attention to the matter and got it before a federal court. There ought also to be indictments by grand juries, as in other cases, and if those fail there ought to be recourse to the federal courts.

The CHAIRMAN. I am glad this question of counterfeiting has been brought up, and I might state in connection with it that the Treasury Department maintains a large secret service, organized primarily for that service; and wherever the United States has provided laws and penalized them it has provided means for getting evidence and bringing suit. That will have to be done in this case, I am sure. I hope you can always have back of the local and state law a United States law. But it is going to require some time to bring about the co-operation between the federal and the local authorities, which I think can be done.

Mr. PALMER. That is largely a legal question that will have to be settled outside. We can not do much by discussing it here, as we seem to be all of one opinion. If there are no further remarks on the remainder of the resolutions, I call for a vote. The state courts are considered very important in many of the States at the present time, but I think as a last resort we should have the power of the United States behind us and the United States judiciary.

Mr. WALL. Mr. Chairman, it is not proposed to interfere with any laws that a State may wish to enact, provided they are parallel with the national law. Injured parties would have two courses open to them. They could take the case before either the State courts or the United States courts. If they failed in the State courts they could then take it to a United States court. Is that right?

The CHAIRMAN. I would not like to give you a definite answer to that, as I am not a legal authority. It would be a good thing if we could bring about something like that.

Mr. WALL. We propose to try to have a law passed at this session of our legislature, and any information we can get along those lines in the way of shaping our laws to conform to what may be enacted by

Congress will be of benefit to us. The penalty clause in a national law would have a moral effect outside of the actual threat of resorting to it. People sometimes do not respect the State authorities nearly as much as they do the national authorities.

In speaking of the moral effect of the United States law I do not believe it amounts to much unless the laws are enforced. You remember how the navigation laws have been enforced in regard to gasoline yachts. Nobody has paid any attention to them lately, yet there was a penalty; but the moment the laws were enforced, arrests made, and people fined the laws were obeyed. I think the penalty can be provided for. In the navigation laws anybody can inform and the informer gets half the fine. The Secretary of the Department has a right to remit these fines, and whenever it is a perfectly apparent case of ignorance of the law or there is some circumstance which justifies the breaking of the law the Secretary remits the fine, but he never does it the second time. That has proven a very wise thing in regard to navigation laws and might be the best thing to do here, as it would educate the people.

Mr. PALMER. Is not this a slightly similar case to the enforcement of the national pure-food laws? We have national legislation in regard to the purity of food and drugs, but, notwithstanding that, we have state departments which have charge of the enforcement of the pure food and drugs laws. I know that in Massachusetts we have a very efficient department, although it has been in existence a great many years. Prosecutions still continue to be made in local courts in relation to purity of food and drugs. I think Kansas and other States also have the same law. Now, all this exists notwithstanding the fact that we have national legislation and, presumably, enforcement of the national legislation in relation to the same subject. I can not find that we are getting much enforcement of the national pure-food law, although I do not want to be quoted as authority. I know in regard to a question that came before the department for investigation some time ago I was told that practically nothing had been done in relation to the actual enforcement of the law. Massachusetts has a very efficient state inspection service in relation to this particular thing. There is hardly a day passes that there is not some case brought up in relation to those offenses. The cases are brought by the state board of health and I know that there is no cooperation except possibly in a general way.

The CHAIRMAN. It seems to me this is a case very similar to what we will have to meet. The advantage of discussing this question thoroughly here is that it enables us to come to an understanding in regard to it. If we have thought out some of these problems we will feel stronger in regard to them when we come to promote them among our local people or our Congressmen.

The SECRETARY. Mr. Chairman, it seems to me there is a necessity for national authority in the matter, even if the States were all organized. A case may come up in which one party who is concerned is in one State, and the other party in another State. I do not see how that can be settled except by national legislation, especially if the state laws are different. I happen to have an example of that right here. This is the second letter received from an importer of olive oil. About two weeks ago he wrote that whenever he imported olive oil and gauged it in Philadelphia the amount that he gauged was always less than the amount with which he was charged. We wrote and inquired whether gauging in New York was done by the customs service, or whether it was done by private individuals, and the answer I have here is in reply to that letter. It reads:

Yours of the 4th instant received. Thank you kindly for the same. I would respectfully ask you to advise me in this matter. Parties in New York in the olive-oil business have a way of doing business that I do not think is right. They scratch out the gauger's mark made by the customs service and substitute another made by their own gauger, and always in their favor. This is what I wish to know, Can they do this without violating the law? Thanking you sincerely for your kindness in advising me, I respectfully ask your reply.

The CHAIRMAN. Who does this gauging in New York, Mr. Reichmann? Is it separate from weights and measures?

Mr. REICHMANN. The commission merchants and the associations are very anxious to have state legislation or national legislation, but they have not been able to get it, consequently they have had to have their own gaugers. They are the ones who are kicking, however.

The CHAIRMAN. Let them have it.

Mr. REICHMANN. We are trying to give it to them.

The CHAIRMAN. I want to say, from the standpoint of the Bureau, that those resolutions have our hearty support. If I had written them from my own personal opinion, they would be the same. I do not see the slightest objection to them. (I am speaking from my own standpoint). I do not see anything there that we can not take hold of and assist in every way to get through. There are two definite things to work for. That to my mind is far better than this provisional legislation, because it is a positive measure. It does not make it permissible on the part of some dealer to do a certain thing if we do so and so, but it says he shall do so and so, which is far preferable. Are you ready for the question?

The resolutions were unanimously adopted.

Mr. PERRIS. I personally am intimately acquainted with both Senators from Rhode Island and the Members of the House. I can assure right now that you will have their support. I would like to have a copy of these resolutions go to them, explaining what we want. I also move that the secretary be instructed to send to each one of

the commissioners of weights and measures and the state sealers, and the governors of the States, a copy of these resolutions.

Mr. WALL. I would like the motion to include all the present members of this association. We are not all sealers of weights and measures.

The motion as amended was unanimously carried.

Mr. REICHMANN. I move that a committee of three be appointed to confer with prominent citizens and at least 12 national commercial organizations, with a view to organizing a national full weight and measure association, whose membership shall be unlimited, and to which anyone in favor of honest weights and measures shall be appointed, the committee to report at the next meeting, but with the proviso that if the committee find it advisable or expedient to organize such an association they will have full power to do so. I would like to know what the sealers think of it. What the whole weights and measures cause needs is the interest of the general intelligent public as well as the purchasing public. Take, for instance, the enormous effect, the enormous power, created by the forestry association. Anyone interested in conservation of any kind can become a member, and thousands of members of the National Forestry Association. Take, on the other hand, the honest weight movement of the millers' association. Think of the thousands of members they have. Practically every miller is giving full-weight flour, and it is wielding a tremendous influence. Take the Flotten Verein, of Germany, with over a million members. Do you think they would get any of the large appropriations they receive in the German Empire if it were not for the Flotten Verein? I think exactly the same thing is needed in weights and measures. I might say that I know a number of prominent and wealthy men in New York who are willing and anxious to start such an organization and finance it for a time until it becomes self-supporting. The National Forestry Association has a fee of \$2. I think a fee of \$1 a year would get a large number of these people interested, and we could have our meetings of the national full weight and measure association (if such be the name adopted) in Washington annually, or twice a year, or even once every two years. We could have thousands of people here and the whole country would be aroused to the importance of the subject.

Mr. PALMER. I do not want to take up time by a repetition of Doctor Reichmann's remarks, but I think the idea is a good one. We constantly have inquiries as to whether such an organization is in existence, or whether they shall do what they can individually to help the cause along. I think I referred yesterday to a talk I had with a dealer in leather while coming over in the Pullman. He told me of some cases which came under his observation, one involving

\$1,300 on a certain shipment. He said what he most desired at the present time was some kind of a standard system of measurements, a standardization of measuring machines themselves and their subdivisions. He asked me whether there was a national organization which considered those things. I told him of this conference. He asked, "Is there not anything that the manufacturers can be connected with in case they desire to give their support, to help establishing new laws?" I think we are all in favor of starting an organization along the lines laid out by Doctor Reichmann.

Mr. REICHMANN. I would like to read a sentence from a letter from Governor Guild. It is not necessary to say anything about Governor Guild, as he is well known all over the United States. I asked him for a letter on the subject of weights and measures, and I wish to read the last sentence of his reply. I think it is the keynote of the whole situation. He says:

Some reforms only touch the average citizen once in a lifetime; but the enforcement of honest weights and measures touches every human being at every moment of every day.

Mr. BENT. I think we all have abiding faith in the natural integrity of the ordinary American business man. I do not believe that it is the desire of great institutions to manufacture nonstandard packages when the conditions can be brought about that will enable them to sell their products in the form of standard packages; nor is it, in my judgment, the desire of the producers of any of our great commodities to sell nonstandard quantities when conditions will enable them to sell their products in standard quantities. I believe this last resolution strikes directly for the fundamental principle and will evolve the most desirable results. I believe there are thousands and thousands of people in this country who will interest themselves from the broad standpoint of equity; and the managements of great institutions furnishing commodities desire standard packages and honest weights and measures.

The CHAIRMAN. This is a matter almost too apparent to need discussion. Any such organization would do a vast amount of good. It would bring the subject before the public and go far to popularize it. We need organization; we can not do anything without it.

The motion was seconded and unanimously carried.

Mr. PALMER. I do not want to impose too many tasks on the Bureau of Standards, as I think it has enough to do already, but there is one thing of which I think we all realize the importance, and that is the letters which the subcommittee received in reply to its inquiries from the different trade associations, in which they heartily indorse the general movement for honest weights and measures and the enactment by Congress of fundamental laws on the subject. We have those letters on file here, each one of which repre-

sents the sentiments of the executive committee of a particular organization. They are strong letters and represent thousands of firms in various lines of business throughout the country, trade associations, etc.

Now, when you get back to your homes each one is going to talk about weights and measures, and it will be considerable advantage if you could have sent to you by the Bureau of Standards a list of the various trade associations that passed those resolutions. It may be possible that the officers of a particular trade organization are in your own town. I know that we have several members of the executive committee and officers of some of these organizations in Boston, and I have already had inquiries by phone and personal inquiries at my office from some of them. Then when this matter is taken up by the local organization or committee, or members of that particular organization in your town, you could take up the matter with them intelligently. I think it would be a decided advantage for each one of us to know just what trade organizations are favorable. I know it will impress you, because they are from large organizations.

The CHAIRMAN. There is another matter that I want to speak of before we get off the subject of national legislation. There will be no trouble arranging for a hearing on such a bill so far as the Committee on Coinage, Weights, and Measures is concerned, and I assume it will be referred to that committee, where it will have to be very carefully and wisely handled. If there is opposition to the bill, the opposition will ask to be heard, and we also will wish to be heard. It would be wise, in case opposition does develop, to have one of the members of the association who is particularly interested here in Washington. We will want to know just what the line of attack is. You can not wait until it is published afterwards, because nine times out of ten it must be answered right on the spot. To my mind it would be a mistake for us to go to the committee and say all we had to say at one hearing, and then let the opposition come in and be heard. I am assuming that there is going to be opposition; I have no doubt of that.

Mr. REICHMANN. There is no doubt about that. There will be great opposition.

The CHAIRMAN. We must plan our campaign accordingly. We will have to have some one who is deeply interested, and preferably it should be some one outside of the Bureau of Standards. Just as quick as the Bureau of Standards goes down there and attacks the opposition, they will say, "Why, this is a Bureau of Standards measure; they have some object in getting that through." In the committee meeting is where the opposition will be met first. We must have representatives from the outside right on the ground. Those of you who encounter this species of deception every day and

can come out with the facts, are the ones who should be heard. The Bureau will come out in as strong language as possible, as we are strongly convinced as to the importance of the matter. We want the measure to go through; but the evidence must come largely from you. I hope you realize the importance of that statement.

Mr. THOMAS. Mr. Chairman, I move that a committee be appointed by the chair to represent this conference at a hearing upon the proposed national legislation before the committee to whom the bills are referred.

Mr. PETTIS. I second the motion.

Mr. REICHMANN. I would like to add this also—to devise ways and means of addressing commercial organizations before the hearing is held. My reason is that many times it is effective to write a letter and anticipate their objections. I will cite one instance out of many. The Eastern and Central New York Coal Merchants' Association was thoroughly opposed to any weights and measures legislation. Their executive committee came to see me in opposition to the measure, and they wanted me to withdraw certain parts of it. Inside of fifteen minutes I showed them where it would help them. They had one of the strongest lobbies in the legislature in favor of the bill. I think it will be very effective to draw up a circular letter, have it printed and sent to all these commercial organizations, together with a copy of the resolutions, and anticipate any of the points of attack which we think will be made.

After a brief discussion the motion was put and carried.

Mr. BENT. It seems to me, in connection with this legislation which it is suggested be enacted by the present Congress, that outside of three or four States and the city of Washington the general public and Members of Congress themselves and their friends and advisers know very little of the real evil; that is, the boiled-down essence of how the public suffers from present conditions. It will be a good plan to prepare a concise statement of definite, specific instances, as many as can be compiled quickly by the gentlemen who have come in personal contact with them, and have the copies distributed among the members of this organization and those interested with us, and the membership of the proposed organization of honest weights and measures advocates. That would furnish the basis of argument before Congress, because it will bring it to their attention from a standpoint they have never considered before.

My attention was thoroughly aroused to the situation during my first visit to this conference by the specific instances set forth in the statements of the gentlemen who are in charge of weights and measures in New York, Massachusetts, Rhode Island, and the city of Washington, and the statement of Mr. Haskell yesterday qualifying a rather random statement I made estimating that people were losing

10 to 20 per cent of what they had paid for. It strikes me that specific facts to show to Members of Congress and the Senate of the United States how their constituents were suffering (and we are all probably suffering alike from this condition of affairs) would bring it directly to them.

Mr. REICHMANN. That is what we are trying to do in the little "Journal of Weights and Measures." In the January number we have a picture of some beans that were bought by the quart, and an estimation as to how much people were losing by buying beans in this manner. An exceedingly conservative estimate tells us the loss in the United States is very nearly a million dollars, or about \$960,000. This is the actual loss to the people of the country. Of course, we have to show it by pictures. There are a lot of detailed measurements of things of that kind which it is difficult to publish. For instance, I have in my office over 5,000 weighings on various package commodities in which we weigh the gross weight and the tare, and find the net weight. We measure the dimensions of the box and put the date on the outside of it. For instance, take the case of raspberries. Here is a box, the gross weight of which is $15\frac{1}{2}$ ounces, tare 2 ounces, leaving a net weight of $13\frac{1}{2}$ ounces, yet it is sold as 1 pound. The box on the outside measures 2 inches by 6 inches by 4 inches. The words "one pound" were formerly on the box, but they had been blotted out with black ink, showing that the box had been used before the pure-food law went into effect. We have 5,000 measurements of that kind on hand; also the names of the packers and the times and the places where packed. We propose to publish all of it. Yet you see what a rather risky thing it is to publish it, because, in a sense, you would do an injustice in that you would not include every one. When we publish something on lard we want to have the name of every packer who puts up lard in the United States. The first thing people will say is, if you publish this man's package of raspberries, why don't you publish this man's and that man's, etc.? That is, referring to your statement of specific instances. Of course, a specific instance is what the people want, and we shall take up all the cases we can in the "Journal of Weights and Measures." We can not do it officially, at least I can not do it officially in New York State as an official publication of the State, but I do hope to publish in June, when the bill goes through, the names of the people who put up such things. I think it would make a book of nearly 150 pages.

The CHAIRMAN. One object I had in asking for this complete statement was that we might use it in our campaign. It is a sort of old story to us, but we have had some of the most valuable evidence given here. I think it is the most interesting meeting we have had from that standpoint.

Mr. BENT. The reason I suggested this feature of the question was due to the fact that I received from the Bureau of Standards a copy of the proceedings of the second conference of this organization. We can only judge the effect upon others by the effect upon ourselves, and my attention was riveted to the specific instances therein set forth by the gentlemen from Massachusetts, New York, and Rhode Island. It seems to me that those would appeal to Members of Congress with great force. The compilation of those facts, without, of course, injuring any line of business, in a volume as large as possible, and yet not so large that it would lose the attention of the Congressmen and Senators, will bring to them the situation of their constituents in such a way as to cause them at least to give the question serious consideration.

The CHAIRMAN. We will do all we can to hurry that up.

Mr. PALMER. I know you are all very glad to get here each year, and it is a great pleasure for us to come and meet here together and meet the officers of the Bureau. I know we all appreciate the fact that they are all very kind and courteous to us, and I make a motion that this organization extend a vote of thanks to Doctor Stratton, Mr. Fischer, and the other officers of the Bureau of Standards for the courtesies extended to us.

Mr. THOMAS. I second the motion.

The motion was put by the Acting Chairman, Doctor Reichmann, and unanimously carried.

The CHAIRMAN. I am sure we all appreciate that. We deal with a great many organizations; we have representative committees in almost every line of the Bureau's work, as the committee of the American Institute of Electrical Engineers, and various committees of that sort, but there is none that is as near to the Bureau as this organization. I am sure we appreciate your coming here, and by and by the knowledge we get from you—that is, the assistance we get by learning the details of what you find in the various places—will be of great assistance to the Bureau. It has already been, but that feature of your work will grow; that is, the relation of your work to the Bureau of Standards.

The election of officers is next in order.

Mr. BENT. Mr. Chairman, before we proceed to the election of officers, it seems to me that this body ought to express itself in some way commendatory of the work of establishing the "Journal of Weights and Measures" by these few members of this organization. Therefore I move you that it be the sense of this body that the journal is highly appreciated and has the hearty support and commendation of the National Conference on Weights and Measures.

The CHAIRMAN. I think this is very opportune and I am pleased that you brought it up, because the executive committee practically

pledged the association to the support of this magazine, and I think it ought to be supported by all the members.

Mr. PETTIS. I second the motion.

The CHAIRMAN. I wish to suggest that it is the custom in most scientific societies to include a subscription to their official journal in the membership fee, and I wonder if it would not be a good plan, if we form this full weight and measure association contemplated, to include in the membership fee a subscription for this journal. If we can get 10,000 members of this larger association, and each one gets this journal as a sort of return for his membership fee, it would help enormously. That is the custom in nearly all societies; for instance, the Physical Society has the Physical Review. I think the matter is worth considering at least.

Mr. BENT. It seems to me that this question of publicity is an important one. This journal is the proper avenue through which publicity should be sought by this organization, and with the consent of my second I shall be pleased to incorporate in the motion that the subscription fee be included in the membership of the broader organization, the full weight and measure association, subject, of course, to the action of the committee after due consideration.

The motion as amended was put and unanimously carried.

Mr. REICHMANN. On behalf of the publication, I wish to thank the gentleman for the motion and compliment. There was a necessity for the publication. You understand it is not a money-making business, as all the services are rendered free of charge. The salary list is incorporated under the laws of the State of New York. We had a peculiar incident when the comptroller asked for our report. He said, "You fail to state the salary of the editor." I put in what we call a "goose egg" for the editor, the assistant editor, the secretary, and all the way down the line. The comptroller said that was a very unique corporation in the State of New York.

Mr. BENT. It seems to me, Mr. Chairman, that the lack of attendance at this conference is worthy of just a moment. The fact that the attendance is less than it was at the first or second conference from some standpoints might be considered of a discouraging nature. However, I do not think it is discouraging to those present; but I think the active cooperation of the governors of the various States could be sought and attained so that our next conference will be very much larger. I believe the governors, when they realize the importance of this work, will take sufficient interest to see that their respective States are represented.

Mr. PALMER. It is a pretty good thing for the delegates to consider getting in touch with some of the surrounding States not represented here. I am sorry to see that Maine, New Hampshire, and Connecticut are not represented. They have very good, active sealers

there who could have represented the State, but they declined to do so on account of the expense. Mr. Pettis, Doctor Reichmann, and myself have written personal letters to the governors in relation to this matter, and I think by next year we will get a representative from each of these States.

The CHAIRMAN. I want to say along this line that in making the investigation of the condition of weights and measures throughout the country, for which we have asked Congress for funds, we intend to go first into States which have no representatives here and depend, so far as we can, upon you gentlemen here for the information from the States you represent. In that way we will not duplicate each other's work. I am sure that the work we are about to inaugurate will bring a larger attendance next year. The plan of taking up neighboring States is a good one. One of the large scale manufacturers was at the Bureau a few days ago and was anxious to undertake some movement exactly like this. I told him that this association had the matter under way and that the thing for him to do was to take some one or two definite States and work up a sentiment there. We can not do all ourselves; we can only reach a number; but we will try to pick out the worst cases.

The SECRETARY. There is undoubtedly more interest being manifested in this particular conference than there has been in any other. We expected to have a large number of delegates, because this seemed to be a desirable time to invite people to Washington. There are many conferences here at this time, Congress is in session, and we were disappointed in having so few delegates. But many of them had good reasons for not coming; for instance, Mr. Haarer, of Michigan, was coming, but at the last moment he had to attend to some very important business and was forced to remain away.

Last year Maine did not even appoint a delegate. This year a delegate was appointed, but there was no fund from which to pay his expenses. The same was true of Connecticut. So it was in other States; for instance, the governor of Alabama appointed seventeen delegates, and the governors of California and Georgia one each. Had all the delegates arrived who were appointed, we would have had by far the largest attendance we ever had.

Mr. WALL. Mr. Chairman, I feel interested in seeing as many States represented as possible, and will do all in my power with people in a position, politically or otherwise, to help. There are a few Western States in which I have relatives and acquaintances, and I will ask them to try to have their States represented at the next conference.

The CHAIRMAN. I want to call attention to the fact that all the delegates present are practical weights and measures officials. It has been a mistake in the past for States to pick up somebody and send

him as a delegate, as they would to any sort of a convention or conference. As a real active representation of the right sort of officials, this is far ahead of any meeting that we have ever had. This is what we want. It is, however, better to have a State represented by an official appointed for the occasion than not to be represented at all, because he goes back to the State and tells what we are trying to do. It results in bringing the proper sort of representation the next time.

Mr. HASKELL. I would like to make a statement relative to the conditions that we find in the city of Washington in regard to flour. If one were to weigh sacks of flour that are sold in thirty-seconds, sixteenths, eighths, quarters, and halves, I think he would find a situation that would astonish him. We estimate that we use 350,000 barrels of flour a year in the District. Of the amount of flour that is put up in sacks for this market about 80 per cent (taking the lowest estimate) will run 4 pounds short to a barrel. We find that the annual loss to the people of Washington on that one item alone is \$67,200. That illustrates the necessity of having something done about this package business.

The CHAIRMAN. Mr. Haskell, does that come from weighing the bag in with the flour, or is it a deliberate leaving out of a certain amount of flour?

Mr. HASKELL. That is a part of it; but the flour itself is short.

The CHAIRMAN. Does it come from the drying out of the flour? In many commodities the question of moisture is very important. What is the usual amount of moisture?

Mr. REICHMANN. It is 16 per cent in butter.

The CHAIRMAN. And you can force in how much?

Mr. REICHMANN. Twenty-five per cent, I think. In fact, a man can not get a position in a creamery in some places unless he understands how to put moisture into butter.

The CHAIRMAN. I wonder if that condition arises in connection with flour; that is, does it dry out to some extent?

Mr. HASKELL. The thirty-seconds should contain $6\frac{1}{2}$ pounds of flour. Our investigations show that it runs from $5\frac{1}{4}$ to $5\frac{1}{2}$ pounds.

Mr. REICHMANN. I would suggest that if any of the gentlemen make weighings of flour and keep the results they send them to the president of the Honest Weight Association, in Knoxville, Tenn. The association has in its employ a half dozen detectives and desires all the evidence of short weight it can get in regard to any brand of flour. When any evidence is obtained against a certain mill, it is notified that it will be exposed to all wholesale merchants if it does not give full weight.

The CHAIRMAN. Mr. Haskell, is the flour you speak of rebagged in Washington, or is it bought in the barrel?

Mr. HASKELL. It is put up at the mill. We have estimated and obtained figures on this matter. In regard to a certain brand of flour manufactured in Minneapolis, we found that the amount of flour saved to the mill by these short packages pays the expense of those big mills.

Mr. REICHMANN. I have not the least doubt of that. I went into a little creamery in Washington, and the proprietor said to me, "We don't have a small creamery; we put up 400,000 bricks a year. We put them up 1 ounce short purposely. It pays all the 'overhead' expenses—that is, operating plus interest on the investment—of this creamery. I do not see why we should not get this as well as the man who is buying the goods."

Mr. HASKELL. The output of one of the concerns in the city of Minneapolis is 20,000 barrels of flour a day. Four pounds shortage on each makes 80,000 pounds of flour a day saved to that mill.

Mr. REICHMANN. With reference to the question of shrinkage, I have in mind a man who buys all commodities in large quantities. He buys flour in lots of about 10 carloads. I weighed some flour which he had just received and also some he had had on hand for eight months and found exactly the same shortage; each 20 bags showed the same. Was it a loss by shrinkage? It was not conclusively proven, yet it seemed to me it was evidence of the shrinkage due to evaporation.

The CHAIRMAN. I would like to ask those of you who are in a position to make a few simple weighings to do so on this question of shrinkage whenever it is possible, as Doctor Reichmann has done. We need to-day all the information we can get on this question. There is a gentleman here to-day who is interested in establishing a conditioning house in New York to study shrinkage in weight, etc. The question of shrinkage comes up in nearly every subject, and the more information you can give us in regard to it, the more interesting it will be.

Mr. REICHMANN. They are inclined to make the excuse of shrinkage on everything, and it is a matter which has to be carefully watched.

Mr. HASKELL. We arrested a man for selling a short-weight pound. Our maximum fine is \$100. He was asked to put up \$100 collateral, which is allowable in the District. Then if the party does not appear it is not necessary to bring him to trial. This man did not appear for trial; he lost his \$100.

Mr. THOMAS. Mr. Chairman, I think we ought to take this position in regard to shrinkage: That water is something that does not cost anybody anything practically; that a person who buys butter or anything else wants the thing he buys and not water, and that it is the consumer who should receive full weight. If the question of shrink-

age is involved, the manufacturer ought to put in an excess weight, so that the water which is there would simply be his overweight. In other words, he will sell a pound of butter as it reaches the consumer.

Mr. REICHMANN. That is the position I have always taken—the consumer is entitled to the correct weight as he buys it over the counter.

The CHAIRMAN. The question of the standard amount of moisture allowable often comes up. Take, for instance, butter. I do not know how it is, but it is quite likely that butter can not be produced without a certain amount of moisture. We have to agree what is allowable, say 10 per cent, or whatever it is. In the case of wool and silk, the standard is a certain per cent of moisture necessary to have in order to weave the material. It is dried "bone dry," then the standard amount of moisture is added. So in some cases we might have to add a certain amount of moisture.

Mr. WELD. In the case of butter, the per cent of moisture depends on the temperature of the churn. In Iowa the temperature at which butter is churned in the creameries is prescribed.

Mr. PALMER. Mr. Chairman, we have some of the same conditions in Massachusetts. Take the case of sausages. In the East it has become the practice, for sanitary reasons, to put up sausages in oiled packages. We found them running a trifle short. I thought possibly it was due to evaporation. This question of evaporation is a most important one and a very lengthy matter to examine into and determine what the amount should be. I investigated this case of sausages, and as far as I could determine they were not pound packages. A short time ago I learned from an employee of the manufacturer that the beam scale was set at 15½ ounces.

We have the same question in regard to butter. It is an important one. Only last week one of my inspectors, working in one of the cities in western Massachusetts, went into a store and took commodities down from the shelves as our inspectors do. He assumed that authority because he knew the commodities were to be sold by weight or measure. We have never yet had our authority questioned. The inspector also took packages of butter out of the ice chest, and those in a great many instances were found to run from 14½ to 14¾ ounces. In all cases the butter was received from the same creamery. My inspector told the dealer not to sell this short-weight butter; that if he did he would have him up in court. When the inspector went down to the depot the next morning he found 26 cases of this butter being shipped back to the creamery.

I had correspondence with the largest millers in the West, and found they are all disposed to put out full-weight packages; but in their letters they said, "Why is it that Massachusetts demands we put up full-weight packages and other States do not demand it?" Their

complaint was that they had to put up special packages to be sold in Massachusetts to comply with what they called the arbitrary law there.

There is a reputable business man in our section who is much interested in the weight of flour. He goes to the trouble of weighing sack after sack of the flour he buys. He buys the finest kind of flour in almost trainload lots. The bags of flour are supposed to weigh 24½ pounds. Only last Saturday we took final action on a case reported to us of 500 bags of flour, which were sold in southern, central Massachusetts. The flour was bought from a wholesale dealer in Springfield, and was the very finest grade we use in the East. All of these bags were from 4 to 6 ounces short of the 24½ pounds gross weight. The dealer said he did not care to prosecute the case if the matter could be adjusted. We corresponded with the wholesale dealer, who said to ship it all back to him at his expense, and that it would be replaced by full-weight bags. He said he would return them to the western miller.

If we take some concerted action in regard to this package business I think it will result in some sort of uniformity being brought about, and the packages will not be, as now, uniform only in some particular sections.

The CHAIRMAN. We will now proceed with the election of officers. Nominations are in order for president.

Mr. THOMAS. I move that the secretary be directed to cast a unanimous ballot for Doctor Stratton as president for the coming year.

The motion was seconded, with Doctor Reichmann in the chair, and carried unanimously.

The CHAIRMAN. Gentlemen, I thank you for this vote of confidence. I am perfectly willing to serve and will do all I can to assist in this matter. I do hope, though, that some time you will break that precedent, because I would like to see this office passed around.

The next election is for vice-president.

The SECRETARY. Last year the office of vice-president was created for the first time, and Mr. Palmer was elected.

Mr. WELD. I make a similar motion in reference to this office, viz, that the present incumbent be unanimously reelected for the ensuing year.

The motion was seconded and carried unanimously.

The CHAIRMAN. The next election is for secretary.

Mr. HASKELL. I move the rules be suspended and Mr. Fischer reelected secretary.

The motion was seconded and carried unanimously.

The CHAIRMAN. The executive committee consists of the officers of the association and four additional members. For the information

of the delegates, I would like to ask the secretary who the members were last year.

The SECRETARY. The members are Mr. Hazen, Doctor Reichmann, Mr. Pettis, and Professor Thomas.

Mr. PALMER. I nominate Professor Thomas, Doctor Reichmann, Mr. Pettis, and Mr. Haskell, of Washington, as members of the executive committee. It seems to me it would be well to have a representative in Washington who is an active sealer.

The CHAIRMAN. Mr. Haskell is on the ground, and that will give us one more member in Washington. It is a very good suggestion, Mr. Palmer.

The nominations were closed and the nominees unanimously elected.

The CHAIRMAN. The next order of business is the date of the next meeting.

Mr. PETTIS. I move that the date of the next meeting be left to the discretion of the executive committee.

The motion was seconded and unanimously carried.

On motion, duly seconded, the convention adjourned for luncheon at 12.30 p. m., to reassemble at 1.45 p. m.

FOURTH SESSION (AFTERNOON OF FRIDAY, DECEMBER 18, 1908).

The meeting was called to order at 1.45 p. m. by the chairman.

The CHAIRMAN. We are very fortunate in having with us this afternoon the Hon. William R. Wheeler, Assistant Secretary of Commerce and Labor, who was to have been with us yesterday, but, as I have explained, he was unable to attend. He is not only very much interested in this movement, but is a business man, and is vitally interested for that reason. He comes from the Pacific coast, and I think I may introduce him as our delegate from California.

Mr. WHEELER. Mr. Chairman and gentlemen, I was exceedingly gratified on arriving here to learn from Doctor Stratton that your meeting has been delightfully informal, because that relieved me of some little embarrassment, as I propose only to make a very informal address. Furthermore, I believe from a practical standpoint that informal meetings—round-table discussions, as it were—are conducive to the greatest good, and the results are far greater, in my opinion, than where the proceedings are made top-heavy with formality.

I assure you it is a great pleasure for me to be here and meet you. I trust you will pardon me for not remembering each and every one of your names, because you have the advantage of being introduced to one man, while I have been introduced to twenty.

I trust that you will feel that the right hand of good fellowship has been extended, and that the hospitality and cordiality we feel toward you are not lessened by the tardiness of this expression. As Doctor Stratton has explained to you, it was impossible for me to get here yesterday, but I am very glad of the opportunity to be here to-day.

I do not propose to take up your time telling you what I do not know about the subject you are here to discuss. I would have liked to have had the opportunity to be present at your meetings in order to have learned something, so that I might speak intelligently on the subject; but that opportunity was not afforded me.

You have all learned from Doctor Stratton's remarks that I am from California, and I remember that when I was a boy there the prosperity of a certain successful butcher in our town was said by some ill-natured persons to be due to the fact that, as they alleged, he sold his goods by the "meat-trick" (metric) system.

As I understand it, the purpose of this meeting is to guard against such tricks. It is to guard against the miracle, as it were, of turning 1 gallon of wine into 5 quarts, which I believe is frequently done in my own State. This is not a day of miracles, and, particularly, we want to guard against that sort of miracles.

While that is not, as I understand it, the direct purpose in hand, yet by cooperation and coordination of the work of this Bureau with that bureau which deals with pure food and the like I believe that we will eventually bring about such a standardization as will prevent that imposition on the public. This is the day of the "square deal," and it seems to me that the work that you gentlemen are engaged in is eminently in line with that policy. I regard you as disciples and missionaries of the "square deal." You bring home to the people who are apt to be imposed upon—the poor and the ignorant—the benefits to be derived from the carrying out of the policies which you advocate and which you are striving to bring about; that is, the establishment of uniform laws with regard to the weights and measures of the country. You confer a direct benefit on the people who more than any others need the benefit of the "square deal."

Therefore I say to you, without attempting to discuss the intricacies and the technique of the very important subject you have under discussion, that my heart is with you; that the heart of the Department is with you in this movement, and that we thoroughly appreciate the interest you have manifested and the zeal with which you have done your work. I thank you, gentlemen.

The CHAIRMAN. I believe that this finishes our business; and if so, a motion to adjourn is in order.

Mr. PETTIS. I hesitate to make a motion to adjourn, because I dislike to break up the meeting and say good-by to all these fine, kind gentlemen; but as we have to leave, I move that we now adjourn.

Mr. PALMER. I second the motion.

The motion was put and carried, and consequently the conference adjourned sine die at 1.50 p. m., December 18, 1908.

DEPARTMENT OF COMMERCE AND LABOUR
BUREAU OF STANDARDS
WASHINGTON, D. C.

Weights and Measures

FIFTH ANNUAL CONFERENCE
OF THE INTERNATIONAL BUREAU OF WEIGHTS AND MEASURES
HELD AT THE BUREAU OF WEIGHTS AND MEASURES
PARIS, FRANCE, FROM MAY 15 TO 25, 1901



Published by the Bureau of Standards
Washington, D. C.



DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
S. W. STRATTON * D RECTOR

Weights and Measures



FIFTH ANNUAL CONFERENCE
OF REPRESENTATIVES FROM VARIOUS STATES
HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C., FEBRUARY 25 AND 26, 1910



GOVERNMENT PRINTING OFFICE
WASHINGTON * * * 1911

DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
S. W. STRATTON  DIRECTOR

Weights and Measures



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WASHINGTON, D. C., FEBRUARY 25 AND 26, 1910



GOVERNMENT PRINTING OFFICE
WASHINGTON    1911

LIST OF DELEGATES WHO ATTENDED THE CONFERENCE.

- W. F. CLUETT,
Chief Deputy Sealer,
Chicago, Ill.
- C. R. DINEHART,
State Treasurer,
St. Paul, Minn.
- L. A. FISCHER,
Chief of Weights and Measures Division, Bureau of Standards,
Washington, D. C.
- WM. F. GOODWIN,
State Sealer of Weights and Measures,
Lincoln, R. I.
- W. C. HASKELL,
Sealer of Weights and Measures,
Washington, D. C.
- P. F. HAZEN,
St. Johnsbury, Vt.
- J. R. KEMMERER,
City Sealer,
Hartford, Conn.
- JOHN KJELLANDER,
City Sealer,
Chicago, Ill.
- A. E. SLEEPER,
State Treasurer,
Lansing, Mich.
- THEO. S. MCCOY,
Private Secretary to the Secretary of State,
Springfield, Ill.
- CHARLES C. NEALE,
Scale Inspector for the State Railroad and Warehouse Commission,
Minneapolis, Minn.
- D. C. PALMER,
State Commissioner of Weights and Measures,
Boston, Mass.
- L. S. PENNELL,
City Sealer,
Portland, Me.
- P. P. QUIST,
State Weighmaster,
Minneapolis, Minn.
- F. REICHMANN,
State Superintendent of Weights and Measures.
Albany, N. Y.
- M. E. RICE,
Deputy State Sealer,
Lawrence, Kans.
- E. O. SATHER,
City Sealer,
Minneapolis, Minn.
- L. S. SMITH,
State Sealer of Weights and Measures,
Madison, Wis.
- S. W. STRATTON,
Director, Bureau of Standards,
Washington, D. C.
- B. F. THOMAS,
State Sealer of Weights and Measures,
Ohio State University,
Columbus, Ohio.
- J. SUTTON WALL,
Department of Internal Affairs,
Harrisburg, Pa.
- J. H. WALLIS,
State Sealer of Weights and Measures,
Boise, Idaho.
- A. N. YODER,
Secretary of State,
Helena, Mont.

OFFICERS AND COMMITTEES.

OFFICERS.

President, Dr. S. W. STRATTON, Director of the Bureau of Standards, Washington, D. C.

Vice President, Mr. D. C. PALMER, Commissioner of Weights and Measures, Boston, Mass.

Secretary, Mr. L. A. FISCHER, Chief of Division of Weights and Measures, Bureau of Standards, Washington, D. C.

COMMITTEES.

Executive committee:

The above officers, and—

Mr. JOHN KJELLANDER, of Chicago, Ill.

Mr. W. C. HASKELL, of Washington, D. C.

Prof. B. F. THOMAS,¹ of Columbus, Ohio.

Mr. P. P. QUIST, of Minneapolis, Minn.

Committee to prepare a net-weight package bill and arrange for its presentation to Congress:

Mr. P. P. QUIST, of Minneapolis, Minn.

Mr. D. C. PALMER, of Boston, Mass.

Mr. JOHN KJELLANDER, of Chicago, Ill.

Dr. F. REICHMANN, of Albany, N. Y.

Mr. A. N. YODER, of Helena, Mont.

Committee on the organization of a full weight and measure league (appointed at the fourth conference, December, 1908):

Dr. F. REICHMANN, of Albany, N. Y.

Prof. B. F. THOMAS, of Columbus, Ohio.

Mr. L. A. FISCHER, of Washington, D. C.

Mr. E. E. BROWN, of Lawrence, Kans.

Prof. L. G. WELD, of Iowa City, Iowa.

¹ Subsequently resigned on account of new law putting the administration of weights and measures law under the State dairy and food commissioner.

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REPORT OF THE FIFTH ANNUAL CONFERENCE ON WEIGHTS AND MEASURES OF THE UNITED STATES

HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C., FEBRUARY 25 AND 26, 1910

FIRST SESSION (MORNING OF FRIDAY, FEBRUARY 25, 1910).

The conference assembled at 10 o'clock a. m., in the lecture room of the Bureau of Standards, the chairman, Dr. S. W. Stratton, Director of the Bureau of Standards, presiding.

The CHAIRMAN. Those of you who have met with us from year to year know that the bureau, whenever it takes up a subject of vital interest to the public, tries to select a representative committee of the people pursuing those interests or occupations. Through such committees the bureau reaches the public and receives most valuable information. This committee, representing the State officials of weights and measures, was the first that the bureau brought together. The question of weights and measures as it applies to the ordinary affairs of life, is perhaps the most important one with which the bureau has to deal. Our first conference of those officials consisted of eight or ten representatives, the next year a few more, followed by an increase the next year, and now, in the fifth conference, we have double the number we had last year.

Now, it is through this body that the bureau reaches the public, ascertains what it needs in respect to weights and measures, and what the conditions are throughout the States. The benefit is mutual. We receive through the committee the benefits to be derived from a close contact with the public, and on the other hand we hope to succeed in taking to the people the advantages which the bureau offers in a way that we could not do without such an organization.

The last year or two we have had with us at the opening the Secretary of Commerce and Labor, the Bureau of Standards being one of the bureaus of that department. Since you were here last we have a new chief, and, I am very glad to say, one who takes a very great interest in the affairs of the bureau. He is with us this morning, and I take great pleasure in introducing to you the Hon. Charles Nagel, Secretary of Commerce and Labor.

Secretary NAGEL. Dr. Stratton and gentlemen, I regard it as a very great privilege to be asked to meet you this morning. As you no doubt suspect, up to a year ago my information about this bureau was probably that of most American citizens. In other words, I had practically no impression as to the purpose and aim of the work done out here; in fact, I am not sure that I knew of the existence of the Bureau of Standards. I am now supposed to supervise the work. I rely upon the privilege of most secretaries to know a little about everything and not much about anything; and I am doubly glad to attest my entire confidence in Dr. Stratton, believing and feeling assured that everything goes well as long as he is here. I have perhaps spoken about this bureau more frequently than he suspects, because I have been out here and admired his work. Generally, it has given me great pleasure to say that one standard for which this bureau stands I have been able to appreciate, and perhaps only one; and that is the standard of the men whom Dr. Stratton has been able to get about him. The force of men out here has impressed me, and of that perhaps I am able to judge as well as others. As I see it, the standard of American manhood is at the bottom of the whole fight.

We hear a great deal about conservation. I am in entire sympathy with it, but I believe it ought to be extended beyond coal and timber and like things, in order to embrace the entire interests of the country, and above all the human force upon which we will ultimately have to rely.

Of course, when it comes to scientific work with which the bureau is charged, I need not say that I suffer from the limitations which obtain in the case of most American citizens. I can admire the results; I may be interested in the methods; I love to see the tools; I can appreciate how neatly and beautifully they are kept, and I can ask questions just as intelligently as my boy of 10 years would ask, if he had the same privilege to see these things. For that we have to rely upon you.

I did not even know that the Bureau of Standards was in communication with the representatives of the different States until Dr. Stratton told me the other day, but when he did tell me that, I think I know enough about the needs of this country to appreciate at once the tremendous significance of that relation between this Federal bureau and the representatives of the several States. In many ways the Federal Government is now called upon to establish standards of one kind or another. Even in the large field of general legislation, in which the States have found it so difficult to arrive at some point of unity of action, the Federal Government has been called upon to adopt model legislation, circumscribed in its application but general in its illustration, so that the States may have an opportunity, look-

ing to that standard, that model, to come to some common agreement, which may result in a common enforcement of the law.

Of course we have a different condition to deal with here, because in this instance the Federal Government is not acting as a volunteer, but is proceeding under a power which the Constitution has vested in the Government—that is, the power to establish standards of weights and measures. That power means everything if the Government choose to exercise it. The significance of that power was recognized, of course, in the beginning, or it would not have been inserted in that solemn instrument. Perhaps even those wise men did not suspect the real need for the exercise of that power with which we are confronted to-day. Because you know better than anyone else, although many of us, mere consumers, are beginning to suspect, how essential the use of this power has become, and how the general public is at the mercy of every species of fraud, if you please, unless that public is protected under this power by intelligent cooperation between the Federal Government and you gentlemen representing the States. Talk about cost of living! I have no doubt there are many explanations for it. Some of them may be charged to pure waste; others may be charged to the greater abundance of gold; still others to combinations; but I believe—and I imagine many of you believe—that short measure has very much to do with the cost of living to-day. You know a good doctor does not need many symptoms to diagnose a case. If he has a good case, he knows what his verdict is; and when I find in buying a bottle of wine that much of it is in the bottom of the bottle in the shape of glass, I know just exactly what people are capable of doing. When I know that large concerns have to change their description from pint to half-bottle, I know why they do it. One has a distinct measure, and the other is left to the imagination. It is so throughout the trade; you know all about it and I need not tell you. It is simply an illustration of how necessary the intelligent and vigilant use of this power is to the protection of the whole public.

Now, that power will be used by some one, and the question is, In whom shall the authority ultimately be vested? Here is just as nice an illustration of the need for cooperation between the Federal Government and State authority as we can possibly find. That need is pressing upon our attention from day to day in every possible field. Wherever you look, in relation to the activity of the Federal Government, you find that there is need for an understanding between the two branches of this dual system of government, and you can appreciate how much will ultimately depend upon intelligent, patient, tolerant cooperation between the two authorities.

Take, for instance, the census. We are now engaged in taking the census, or are about to start upon it. In some States we have to

appoint every single official who has anything to do with the census. We have to create this force from the bottom up. In other States the whole machinery is established, and the Federal Government, recognizing that it could not by any amount of trouble or pains supply as good machinery as the State has, instead of making the attempt, simply adopts the State machinery bodily and asks it to do its work. Massachusetts has such a system. In the whole State of Massachusetts we have appointed just one supervisor and told him to go ahead according to the accredited system of his State. In other States we find absolutely no preparation, and every 10 years we have to build up as best we can a system of relatively inexperienced men.

It is so in other fields. Take the fisheries. We are told to protect the fisheries of this country. We boast of doing extensive work along the coast lines and in the rivers, but, as I said at a meeting in one of the States the other day, you must cooperate. So far you are really embarrassing us, because the more fish we supply and the more lobster we supply the more prompt are you to resort to all kinds of illegitimate use of nets and traps and everything else to destroy the result of our work. That is not cooperation; and if we are to be met by that kind of work on your part, you will necessarily retard and discourage our work correspondingly.

Now let us take our immediate work, weights and measures—the protection of the public against the fraud that undoubtedly exists. Not only must there be cooperation between the two, but if the States fail in sustaining the standards which the Federal Government establishes under its constitutional power, then I predict that just as certain as there is a Federal Government, it will supply the agencies and take charge of the whole business. It has the power, without any question. We hear a great deal now about the encroachment of Federal power upon State authority. I am not alarmed about that, because I believe that the States are waking up to the situation. But it would not be an encroachment. If the Federal Government has the power to fix the standards, it has the power to say what shall happen if those standards are not obeyed; and that means the power to make laws and to send out agents, who will have the authority and the right to enforce those standards and those laws with respect to every citizen of the United States. That is what we may come to.

How would it be brought about? There is no thought of it now. There will not be any thought of it provided the States, by their own machinery and their own officials, see to it that the general public is protected against fraud upon the standards which the Federal Government has established. That is the way it will have to be done. It is a beautiful case of cooperation. You could not find a better illustration, and you could not find a better illustration

of the dangers of the gradual growth, legitimately enough, of Federal authority at the expense of State authority, if the State fails to do what lies within its power.

I am glad to have been here to meet you, and I am particularly grateful to have had Dr. Stratton bring me face to face with an instance which illustrates the present needs of political cooperation under a dual system of government, in my judgment, as happily as any case possibly could.

Now, gentlemen, I have been asked to speak to the President, and I shall speak to him to-day, and endeavor to make an appointment to-morrow so that you may have the opportunity to meet him personally. You represent so large a proportion of the States, and you represent a matter which is of such profound concern to the entire country, that I am sure it will be regarded as a pleasure on his part to meet you. If I am successful in making that appointment, I shall advise Dr. Stratton accordingly. I thank you.

MR. REICHMANN. Mr. Chairman, I am sure that this body would like to have the Secretary's speech in printed form, and I therefore move that 5,000 copies be printed by to-morrow morning at 10 o'clock, if we can get them. I think it is a comparatively simple matter to get 5,000 copies by to-morrow morning, and I think it is highly important that every delegate here take home some copies of it and distribute them to the newspapers, or to the members of the legislature, or to such people as he desires to give them, so as to bring the matter before the public, because statements of that kind, coming from the Secretary of Commerce and Labor, will have a great deal more authority than statements coming from almost anyone else. If the Bureau of Standards can not get it printed officially, I for one would be very pleased to help pay for the expense of printing, and I am sure most of those here would do likewise.

THE CHAIRMAN. I do not believe we could get it done through the routine channels by to-morrow morning.

MR. GOODWIN. Mr. Chairman, I move to amend that motion to provide that Dr. Reichmann be delegated as a committee of one to see to the printing of this document, which we all, I believe, want.

The motion was seconded, and, after some further discussion, the motion as amended was carried.

The secretary then called the roll, the following-named members being present:

MR. KEMMERER, Connecticut.

MR. HASKELL, District of Columbia.

MR. WALLIS,¹ Idaho.

¹ Mr. Wallis did not arrive in time to take part in the conference. See telegram, p. 106.

Mr. KJELLANDER, Illinois.
Mr. CLUETT, Illinois.
Mr. MCCOY, Illinois.
Mr. RICE, Kansas.
Mr. PENNELL, Maine.
Mr. PALMER, Massachusetts.
Mr. SLEEPER, Michigan.
Mr. DINEHART, Minnesota.
Mr. QUIST, Minnesota.
Mr. NEALE, Minnesota.
Mr. SATHER, Minnesota.
Mr. YODER, Montana.
Mr. REICHMANN, New York.
Mr. THOMAS, Ohio.
Mr. WALL, Pennsylvania.
Mr. GOODWIN, Rhode Island.
Mr. HAZEN, Vermont.
Mr. SMITH, Wisconsin.

The SECRETARY. Mr. Chairman, I would like to make a report on the changes in legislation that have occurred since last year, so far as we have been able to obtain them.

Illinois has passed a law giving the cities permission to pass ordinances requiring certain commodities to be sold by weight.

In Delaware the State chemist has been made State sealer of weights and measures. This office was formerly under the secretary of state. Also, milk must be sold by the standard gallon and pint. Half of certain fines for short weights and measures goes to the informer.

Tennessee has passed a law providing a heavy penalty for marking or representing packages to contain more than they actually do contain. I think they allow a variation of 1 per cent.

Ohio has passed no laws, but sale by weight instead of measure is being agitated.

That, I think, represents about all the new legislation that has been passed in the last year, but perhaps there is some that the delegates can tell us about.

Mr. KJELLANDER. Mr. Chairman, I did not hear the report from the State of Illinois. There has been a law passed there, or an enabling act, giving the different cities and villages throughout the State the right to sell everything by weight in place of measure; and in the city of Chicago, in accordance with that law, we have before the city council to-day an ordinance to the effect that all commodities, with the exception of cereals, must be sold by weight in place of measure. I hope that inside of a month or so that ordinance will be passed, which will practically abolish all capacity

measures. Of course the reason that we did not in that ordinance regulate the sale of cereals by weight was that we would come in contact with the serious question of original packages. I hope that that question will be discussed here to-day, and that some action will be taken on that proposition.

Mr. GOODWIN. Mr. Chairman, I would like to make a report on the change of the law in Rhode Island. Formerly we had the right to sell coal by the bushel; now the statute has been changed and coal must be weighed, and an amount less than 100 pounds sold in any container must be marked with the kind and the number of pounds of coal it contains. I think that is a very important thing for us to report on here to-day, for the reason that it has changed our organic law. I think there is no other change except in the methods of handling our sealing business.

The CHAIRMAN. Are there any further reports on changes in legislation or new legislation?

Mr. PALMER. Mr. Chairman, do I understand that you are asking for a general report now? I thought it was customary at these meetings to go right down the list of delegates and let each man make his report in order. Is that the intention?

The CHAIRMAN. That is part of the program. The executive committee has put in my hands a tentative program, and I am following that. I suppose that this report of legislation that has come to the bureau was simply included by Mr. Fischer in his report as secretary, and that additions or corrections will be made later in the reports of delegates. I think it is rather important that this legislation should be called to the attention of the delegates. However, I think in most cases that will come in the regular reports of the State officials.

The SECRETARY. Of course these reports that we have are necessarily incomplete. They are merely a few things that have been reported to us or have been discovered by our inspectors.

The CHAIRMAN. The next in order are the reports of committees. I will ask the secretary to report and to name the standing committees.

The SECRETARY. At the meeting yesterday of the executive committee, it agreed on a program, which perhaps I had better read to you, and is as follows: "Address by the Secretary of Commerce and Labor; the roll call; report of the secretary (which I now make); reports of committees; reports of delegates; a paper by Dr. Reichmann; a discussion of bills before Congress and city ordinances; and new business."

The executive committee will present for discussion a draft of a bill which is to be submitted to Congress and is entitled "An act to prevent the manufacture or use of dishonest or fraudulent weighing or measuring appliances in commercial transactions." We also discussed a bill, which has already been introduced in the House by

Mr. Mann, of Illinois, to amend the pure food act so as to require that the net weight of the contents of all containers shall be plainly marked on the outside of the package in terms of net weight, measure, or numerical count.

The only other committee we have, Mr. Chairman, from which we can get a report is the one of which Dr. Reichmann is chairman. It was a committee appointed in compliance with a resolution adopted last year to appoint a committee to form a full weight and measure association.

The CHAIRMAN. Dr. Reichmann, the report of your committee is now in order.

Mr. REICHMANN. I will give that to the secretary to read.

The secretary read the report, which is as follows:

"The committee appointed to consider the formation of a national full weight and measure association respectfully reports that in order to have such an association, which the committee deems most desirable, it is first necessary to arouse sufficient public sentiment and to obtain sufficient funds in order to accomplish this purpose. The committee has been working along these lines and wishes to report progress and desires an extension of time before making its final report." Signed by Messrs. Reichmann, Thomas, Weld, Brown, and Fischer and dated February 25, 1910.

Mr. PALMER. I move that the report in part of the committee be accepted and that the committee be given further time.

The motion was seconded and carried.

The CHAIRMAN. The next thing on the program is the reports of the delegates.

The SECRETARY. Mr. Chairman, before you go any further, I would like to propose a correction to the program. We neglected to provide for the election of officers. I make a motion that the program be amended so that the election of officers will take place just before we take up new business.

The motion was seconded and carried.

The CHAIRMAN. We ought to have a perfected organization. This is a matter on the program, and the election of officers ought to be provided for in some sort of by-laws.

Mr. PALMER. Do we not have a set of by-laws? If not, I move that a committee be appointed by the chair to prepare a proper constitution and by-laws, and report at the meeting to-morrow morning.

Mr. THOMAS. My recollection is very clear that our present organization was effected following the action of a committee appointed for some such purpose as this. I can not say positively that that committee was the one instructed to prepare such a constitution and

by-laws. I was a member of that committee and think such a thing was done.

The SECRETARY. Mr. Thomas is right. There was an organization formed at the first meeting and the record of that is in the proceedings of the first meeting. It did not go into details, but provided for an executive committee, a president, a secretary, and was amended later to include a vice president among the officers. We can get a copy of that and turn it over to the new committee to amplify it if that is the intention.

The motion was seconded, and there being no further remarks, it was put and carried.

The CHAIRMAN. If there are no further matters to be considered at this time, we will now proceed with the reports of delegates. The first State, taken alphabetically, is Connecticut, which is represented by Mr. J. R. Kemmerer, city sealer of Hartford.

Mr. KEMMERER. Mr. Chairman and gentlemen, it gives me great pleasure to be here on behalf of the State of Connecticut. I am sorry that we have not been able to get a delegate to this convention heretofore. While there are a number of men who might possibly represent the State of Connecticut to better advantage than I, it is a pleasure to me that I have the honor to come here as a representative of that State.

You are all probably familiar with the laws in the State of Connecticut. There might be a number of changes made which would be of benefit to the State. I have been sent here to listen and learn of these things, so that the State of Connecticut may become benefited thereby. It is not necessary for the benefit of the Bureau of Standards to say what is being done in the State of Connecticut, as the bureau has had a representative making thorough investigations concerning matters there.

One or two new bills have been passed by our legislature which, I think, will benefit the State materially. A bill was introduced by our county treasurer, Mr. Marcus Holcombe, at the last session of the legislature, giving him, or the county sealers, or the acting county sealers power to delegate their power to some of the local sealers of weights and measures. This is a step in the right direction from the former law, under which no local sealer of weights and measures has had power to go to the State for verification of his working paraphernalia except a county sealer. In New Haven County the sealer of weights and measures of the city of New Haven has had this power for some time. How he got it I do not know. It may be that our State paraphernalia is not in as good shape and might not be as accurate as it should be, yet it is going to give these sealers the satisfaction of knowing that their working outfits are as near correct as those of the State.

Another bill which was introduced in our last legislature and passed, provides that every print of butter shall be plainly marked with its net weight. It has occasioned considerable consternation throughout the State, and Mr. Potter, State dairy commissioner, has issued his proclamation that on and after April 1 of the present year the law will be enforced. We have had considerable controversy over it, but it is a law which should be carried out, for I believe that on butter alone the States are losing more money yearly, with one exception, and that is milk sold in bottles, than on almost any other commodity.

A new lease of life has taken place in my own State. As president of the State Sealers' Association I tried hard for one or two years to get an association together, and we got some 12 or 14 men together in Hartford about two years ago and formed a State sealers' association. In the morning it was easy to interest them, but when noon hour was over it was hard to get them together again. I have upon my own responsibility gone around the State a great deal and have been the means of infusing new life into this matter. Since last year the city of New London has awakened from its slumbers and taken up the matter and is presenting it to the city council. I was invited there to speak before the councilmen and business men. If the proposed laws are passed, New London will be placed on a par with other cities in these matters. Other towns and cities that have taken the matter up during the last year are Manchester, Putnam, Winsted, Thomaston, Ellington, Hartland, and New Milford. Some of these towns have had sealers of weights and measures in name only; but with new life and new blood, they have again started out. Next year we shall see quite a big change in the sealing of weights and measures in Connecticut.

The first year I went into office, acting upon the advice and suggestion of Mr. Palmer, of Massachusetts, I took up the matter of requiring the sale of such commodities as beans, peas, chestnuts, walnuts, cranberries, and similar articles to be by dry measure instead of liquid. It has practically done away with the liquid measure in the sale of these commodities.

In my own city we have had new ordinances introduced in regard to the sale of ice, requiring the carrying of scales on all teams and the weighing of the ice when requested. On January 24 of this year an ordinance was introduced which seems to me to be one of the broadest and most sweeping ordinances I have ever seen. It reads as follows:

SECTION 1. The sealer of weights and measures may, at such reasonable times as he shall see fit, intercept in the process of delivery from the seller to the buyer goods sold by weight or measure, or in cases where goods are exposed for sale in packages or parcels represented as being of a certain weight or

measure, take up and weigh or measure such goods, and it shall be his duty to report to the prosecuting attorney any instances where the goods are sold or exposed for sale as being of greater weight, measure, or quantity than such goods in fact weigh or measure.

SEC. 2. It shall be lawful for such sealer of weights and measures to enter any store, house, building, yard, or other inclosure in this city where goods are sold by weight or measure or offered for sale in packages or parcels represented to be a certain weight or measure for the purpose specified in section 1 hereof.

This ordinance has had its effect upon the wholesale man. I have had wholesale dealers of all kinds visit my office in regard to this matter, and especially the flour dealers, who put up flour in bags weighing from 25 down to 12½ pounds. The bags are marked with the net weight, and in the city of Hartford I found flour that averaged as much as 14 ounces short from the weight stated. I have taken the matter up with the mills. The butter men have also been in to see me, and I am sorry that when these laws were put before the people and passed by the common council a milk-bottle law was not also passed. This matter is entirely in the hands of the board of health. It is one of the most common evils that confront the American people to-day; not only from the point of shortage, but as a disease breeder, for the bottles go into all sorts of homes and all sorts of places. These are the conditions that exist not only in Hartford, but in other cities throughout the United States. Connecticut has been for a number of years the dumping ground for New York, Massachusetts, Vermont, New Hampshire, and the surrounding States. We endeavored to get the different glass blowers together in my city, and we had four or five men present who claimed that it was utterly impossible to make a standard milk bottle. A short time after that a company came into our city with a bottle that was standard, and they are, in the majority, perfect. If one company can make a perfect bottle, why can not others? In Chicago, I understand, the so-called quart milk bottle must hold a quart, and the so-called pint milk bottle must hold a pint, it having been so decided by the supreme court.

If the laws on our statute books, with a few changes, were properly enforced, I think conditions would probably be a great deal better than they are to-day. Who is going to enforce them? That is the question. Until we find the proper officer to enforce the laws, conditions will be as bad as ever, even though the local sealers throughout the State give their very best services.

Outside of Litchfield County I do not believe there is a complete set of working apparatus in the possession of a county treasurer. In our county, Hartford, we have a set of liquid measures, a set of dry measures, a yard stick, and a troy pound. I have obtained a set of weights from 1 ounce up to 50 pounds. I have a Fairbanks'

standard balance and a set of weights from 1 ounce to 50 pounds. The State has tested these for me, so that I have something to work upon. Only a short time ago this question of weights and measures was discussed in our daily papers, and an old ex-State sealer and county sealer, the only one we have ever had, said that if the accuracy of the weights of our local sealers of weights and measures were questioned he failed to see where I could satisfy the people of Hartford that these weights were correct. These are some of the conditions existing in Connecticut.

I believe a law should be passed, and it should emanate from the Bureau of Standards, requiring the different States in the Union to comply with some fundamental Government laws in regard to weights and measures. I do not think the Bureau of Standards can give this matter too much recognition throughout the United States, or make it too public. I believe that if requests for cooperation, coming from the Bureau of Standards on such measures as it may introduce into Congress, were presented to the governors of the States, when they meet here once a year upon invitation, they would do what they could to bring before the public one of the widest and broadest questions that can be brought before the American public to-day, and that is the sealing of weights and measures.

Mr. REICHMANN. I would like to ask Mr. Kemmerer a question. There was a bill before the last Legislature of Connecticut proposing the establishment of a State department of weights and measures, and is right in line with the work that the secretary gave us. I would like to ask whether the bill was defeated. It seemed to be a very good measure and I spoke in favor of it.

Mr. KEMMERER. In answer to Dr. Reichmann I would like to say that the last bill presented to the Legislature of Connecticut was a bill that I had nothing to do with and in which I was not interested. I did not approve of the bill. It looked to me as if the bill was being presented to make a position for a certain man who had none. I do not believe that any State should put a bill before its legislature unless the State will be benefited by it. I say this not that I desired to take the position of State sealer of Connecticut—if I am permitted to take care of Hartford I will be satisfied—but when the position of State sealer is created in any State I hope the office will seek the man and not the man the office.

The CHAIRMAN. Before proceeding I should state that we have just had a message from Secretary Nagel saying that President Taft will be pleased to meet the members of this conference to-morrow at 12.30 o'clock.

The next report is that of Mr. W. C. Haskell, who represents the District of Columbia. We are always glad to hear from the District of Columbia.

Mr. HASKELL. Mr. Chairman and gentlemen, I have not prepared any statement, but I am pleased to say that the District of Columbia is provided with efficient laws to protect the public against sales by short weights and measures. We have our regular routes and cover certain territory in the District each day, so that we are able in the course of six months to entirely cover the city in the inspection of scales, weights, and measures. The records of our office are carefully and systematically kept, and I might say at this time that I shall be pleased to meet any of the gentlemen here and explain our methods. The office is in the District Building at the corner of Fourteenth Street and Pennsylvania Avenue.

The office could profitably use more assistants, but with the two it has at the present time and equipment in the way of conveyances, etc., we are doing much toward protecting the public against short weight and measure sales. The benefit to the consumer is, of course, difficult to estimate—that is, the amount in dollars—but when I state that hundreds of thousands of dollars are saved each year I am not overestimating. Regular inspection of scales, weights, and measures and the exposure and prosecution of persons violating the weights and measures law are of great benefit to the public. The dealers should be educated and forced, if necessary, to a realization that they must give the consumer what the law requires and that for which he pays.

Mr. PALMER. For the benefit of others and myself I would like to inquire as to just what has been done with regard to the sale of bread in the District of Columbia; I would like very much to hear Mr. Haskell report on it.

The CHAIRMAN. I am glad that Mr. Palmer brought this out, as we should like to know something of what has been going on in the different States. It is one of the objects of the meeting.

Mr. HASKELL. The bread law of the District of Columbia had been in force for more than 100 years in Georgetown, which is now a part of Washington, and for more than 50 years in Washington proper. It requires that a loaf of bread shall weigh a pound or multiples thereof. We took a case of short-weight bread into the court, and it was finally decided that the organic act, so-called, of 1878 repealed the bread law. Consequently, since that time we have been trying to perfect a law that will make the standard loaf of bread weigh 1 pound. The law remained in force so long that the people expected to receive a pound for a loaf, just the same as they expect to receive 2,240 pounds for a ton of coal. The bakers have taken the position that they do not need any law in the District for the sale of bread; that competition will regulate its sale and weight. I think it would be proper for me to say, Mr. Chairman, that the president of the National Bakers' Association is a resident and baker of the District

of Columbia and that his influence in opposing any regulation governing the weight of bread will probably result in opposition on the part of the Bakers' Association, in different sections of the country, to the enactment of any laws tending to regulate this matter.

We are of the opinion that there should be a standard weight, and there is no good reason why the people should not receive a pound of bread for a loaf. If the bakers, as they claim, are unable to sell 16 ounces of bread for the usual price of 5 cents, then let them increase the price; but to leave the matter open or in the condition that it is now, so that a baker can put whatever weight he pleases into a loaf of bread, I think would be a long step backward. The usual weight of a loaf now is 14 ounces, but we find a great deal of bread that weighs 13, 12, and as low as 11 ounces. The consequence is that the consumer, instead of receiving for 5 cents what belongs to him, receives 20 or 25 per cent less. To further illustrate the importance of this matter, the amount of bread baked in the District of Columbia is now about 200,000 loaves daily. The housewives have largely dropped the habit of baking their own bread, depending upon the bakers for their supply. A shortage in weight of 1 ounce in a loaf of bread means the loss of 12,500 loaves each day, and 2 ounces, the usual amount of shortage since the law was declared invalid, means a loss of 25,000 loaves, or enough to give one-fifteenth of the population of the city of Washington a full loaf (16 ounces) of bread a day. This gain is going into the pockets of the bakers. Figures which I have in my office show how much this amounts to in addition to a fair profit. The excess gain runs up into hundreds of dollars per day.

Another condition in the District of Columbia, according to information which is considered reliable, is that 183,000 of the 200,000 loaves baked every day are baked by seven bakers, while the remaining 17,000 loaves are baked by 75 or 100 small bakers. In other words, the seven bakers in the District control the output, and while they claim that they are not in a trust, they do not attempt to deny that they have their meetings regularly and talk these matters over and decide on what they shall charge for their bread. The consequence is that the people of the District of Columbia are in the hands of the bakers—a trust or whatever you may please to call it.

We are informed that the matter is being taken up thoroughly by different cities throughout the country. Chicago has a bread law which we have used as the foundation for a regulation which is now before the District Commissioners, requiring that bread shall be sold by weight, and establishing a standard of 16 ounces for a loaf. The Chicago law, I understand, has been carried through the State courts and has been sustained, so that the position taken by the bakers here that it is unconstitutional to demand a standard has been adjudicated

to the contrary. In fact, our corporation counsel informs us that this matter has been decided by the Supreme Court of the United States—that it is not unconstitutional to require that the weight of a loaf of bread shall be a certain amount—and it is safe to say that there is no valid reason why the bakers can not and should not give the people a standard weight for a loaf of bread, so that they may know what they are receiving and paying for. It is a question that has taken a great deal of our time and has been considered in all its phases, and we can not arrive at any other conclusion than that it is proper and just in the interests of the public that a loaf of bread should be of a certain standard weight.

The CHAIRMAN. Of course, there is this phase to that question: We can not fix both variables. If we fix the weight, then the price must necessarily be flexible. At least we can not do this until we reach a much more advanced stage of civilization. At the same time the public is better enabled to tell just what competition is going on and what it is paying for if the weight is a fixed quantity than if the price is, because it knows what the price is, but scales are not always at hand.

Mr. HASKELL. I might say that the argument is made by the Bakers' Association that it is impossible to bake an exact pound loaf of bread. Of course, that is an argument that we look upon as being made for their own interests. I know personally that it was done for 12 years; that they have given the people of Washington a loaf of bread that weighed 16 ounces. Of course, they had to put into the manufacture of that bread 17 or 18 ounces of dough, but there was no trouble about that. We inspected bread in large quantities regularly, and, when the bakers were not expecting us, at their places of business. It was seldom that we found the bread varying more than one-eighth to one-sixteenth of an ounce in weight.

Another argument that the bakers make against a standard is that bread will shrink in weight. We are informed that bread properly baked will not vary one-sixteenth of an ounce in weight in 12 hours, and very little more in 24 hours, so that there is no valid foundation for the argument that they can not bake 16 ounces of bread to the loaf. It is possible that the weight of a loaf of bread might vary one-sixteenth of an ounce, or thereabouts, but any official would take that into consideration. If the intention were not to defraud, I would look at it in that way. So I can not see, from all our investigations up to date, any reason why the baker should not give 16 ounces of bread to the loaf. They also claim that the price of flour has increased, so that they can not afford to give 16 ounces for 5 cents. If they can not do this, then let them increase the price, but not reduce the weight. If you go into a store for a dozen of eggs you do not expect the merchant to give you 10 or 11 eggs for a dozen because

the purchase price has advanced. So with any other commodity. If you open the door for one commodity to be sold in a less amount because of an advance in the cost of the constructive materials, there is no knowing where you are going to stop nor how wide open you leave the door for the perpetration of fraud on the public.

The CHAIRMAN. The next State having representatives present is Illinois. We will now hear from Mr. T. S. McCoy, secretary to the secretary of state.

Mr. McCoy. Mr. Chairman and gentlemen, in Illinois the secretary of state is ex officio State sealer of weights and measures. His duty is to try and prove, by the standards in his possession, all weights and measures, scales, and beams which may belong to any county, and be sent or brought to him for that purpose by the county sealer; and shall seal such, when found to be accurate, by stamping on them the letter "I," with a seal which he shall have and keep for that purpose.

County sealers are required to try and prove all weights and measures, scales and beams when requested so to do.

Power is given to cities and villages to inspect weights and measures.

The coal mines of the State are required to have correct scales to weigh all coal mined. The bulk of the work of the secretary of state as ex officio State sealer of weights and measures is the trying of weights for the coal mines.

The legislature of 1909 passed the following law:

That the city council in cities, and the president and board of trustees in villages and incorporated towns, shall have power to require all grains, flour, meal, hay, feed, seeds, fruits, nuts, vegetables and nonliquid vegetable products, meats and nonliquid animal products, fish, butter, cheese, and other similar dairy products, dry groceries and all other similar articles of merchandise, or any particular class or classes of such merchandise, in the absence of a contract or agreement in writing to the contrary, to be sold by standard avoirdupois weight or by numerical count.

The above is the only change in our laws in relation to weights and measures since your last meeting.

We have with us, Mr. Kjellander, city sealer of weights and measures of Chicago, who will give you an interesting account of the great work he is doing there.

The CHAIRMAN. I have been a resident of Chicago, and I remember when I left there the city was just becoming awakened to the question of weights and measures, and Mr. Quinn, the city sealer, was getting very active. Since that time Mr. Kjellander has been carrying on that work, and the city, to my mind, presents one of the most interesting as well as one of the most difficult phases of this problem. I am always glad to hear from representative city sealers, especially of the larger cities.

Mr. KJELLANDER. Mr. Chairman and gentlemen of this convention, I am not going to speak on the subject of scales, because I think that is a subject that can easily solve itself. It is not so much the incorrect scales that we have to do with in the city of Chicago as it is the proposition of how to teach the people to use a correct scale correctly. The grocery men and merchants can not see 16 ounces; they can see only 13, 14, or 15 ounces to the pound; at least, it was so some years ago in Chicago. I am going to say something in regard to the State of Illinois, and then I am coming back to Chicago.

We have a law in Illinois governing weights and measures, a law in my opinion that is not worth much. At the last legislature I had introduced a new weights and measures bill, a comprehensive one, but the legislature, in turmoil during the whole session, saw fit to consider other questions rather than to pass measures that would be of more benefit to the public. They spent a great deal of time on these subjects in the dying hours of the session. My comprehensive weights and measures bill came up about 1 o'clock in the morning, when they set the hands of the clock back to 12 o'clock, and lost out by 3 votes. I succeeded in getting a bill through giving the cities and villages a right to sell all commodities by weight in place of measure. That was passed during the last hours of the legislature.

I also had another bill in the legislature of which some of you have heard, and have been trying to get through your own legislatures, and that is a net-weight bill. They, in Illinois, turned down the net-weight package bill, and I say to you without hesitancy, that not to indicate the net weight on package goods is to-day the biggest fraud and humbug that has ever been perpetrated on civilization. I lost that bill—capital was too big. I could not stand up against the pressure. However, we gave them a fight for three long weeks; we had them guessing for three long weeks. If I had been able to shake up the honorable chairman of the committee on municipalities for the State of Illinois, I probably could have gotten my bill out of the senate, but it slumbered in his pocket. For what reason I don't know. He asked me one day: "Didn't you get a fair hearing?" "Yes," I said, "I got the fair hearing, but that is all I did get."

We have, as I said, a poor law in the State of Illinois. However, men can do a great deal of business even under a poor law, and, thanks to the great police power of the different city councils and trustees of the different villages throughout the State, we have been able to do some work; at least in the city of Chicago.

I have had some decisions rendered by the supreme court in some of the cases that I have brought before it—decisions that are very strong—one upholding the milk-bottle ordinance and another upholding the ordinance requiring that a loaf of bread shall weigh a pound. In these two decisions the supreme court settled without any question

the police power of the city council of Chicago. The last two and a half or three years of my term of office have been very busy ones. I am not going to talk of theories, but facts. It is not because I want you to know what I have done myself, but what can be accomplished if you get proper ordinances passed and then enforce them.

There have been more inspections of scales and try outs of scales among coal dealers, ice dealers, and peddlers and more fines collected in our department during the last two years than there ever have been in the history of the department. I want to give you a few figures. In 1907 we tested 106,336 scales and measures and tried out 3,592 stores and places of business. In 1908 the number of scales and measures was 115,718, and the number of stores and places of business tried out was 6,142. The number of stores, places of business, coal dealers, ice dealers, peddlers, and so forth, tried out in 1909 was 8,800, an increase of 2,658 over the previous year. We have taken in during the three years mentioned in fines and inspection fees \$88,367.55, the fees amounting to \$66,855.55 and the fines to \$21,512 for short weights. The expenditures for the same period amounted to \$81,599.10, which proves that my office was more than self-sustaining to the extent of \$6,768.45.

One of the first things that I encountered in my office (in which office I have had nothing but troubles, and any man who is a conscientious and efficient sealer, in my opinion, will have nothing but troubles) was impoliteness. Never does a man come into my office and say, "How do you do" in a friendly manner. No; he is mad when he comes in and probably mad when he goes out. One of the first things that came up when I took charge of the department was the milk-bottle ordinance, which provided that milk or cream should be sold in glass bottles or jars of 1-quart, 1-pint, or $\frac{1}{2}$ -pint size. I had the ordinance changed to read that if milk or cream was sold in glass bottles or jars, each of said glass bottles or jars should have the capacity blown on the same or otherwise indelibly or permanently indicated thereon, and, further, that each of said bottles or jars should be of the capacity it purported to be. The passage and enforcement of this ordinance gave me a great deal of trouble and many sleepless nights. Immediately the politicians, and not only politicians, but men of prominence in the city—those men who sit at banquet tables and say that a man who holds a public office is as a general rule a "grafter"—were the first to object when we came to introduce an ordinance of this kind. They did not hesitate to see the mayor of the city and demand my dismissal. They came to my office in droves, demanding that a tolerance over and under measure be allowed them. I took the stand that a quart is a quart, a pint is a pint, and a half pint is a half pint. I did not tell those men that they had to sell their milk in glass bottles or glass jars. I said to them: "Sell

your milk anyway you see fit, but if you are selling it in glass bottles or glass jars on which you have marked the capacity it must be that capacity. I do not care what you give over. I am not looking after overweight or overmeasure. I am looking after underweight and undermeasure." They presented arguments to me showing that it would be impossible for them to make an exact bottle and insisted that a tolerance must be granted. They went to the mayor's office day after day. They had the glass manufacturers there from all over the country. One of them told me something about a machine which he had to make bottles, and he said his bottles were the only correct bottles in the world. I said: "If your bottles are correct, go ahead and make them, but leave me alone." Finally one day he called upon the president of the Glass Manufacturers' Association and had him come to Chicago to see me. He argued with me and told me I must give them a tolerance. I said: "If you are making correct bottles, why do you want a tolerance?"

The ordinance was passed, and I gave the milk dealers a short time to comply with it. I sent my inspectors throughout the city and tried out the bottles in which milk and cream were being sold or offered for sale, and finally, after a number of flagrant violations, I sent complaints to the prosecuting attorney, who in turn brought suits before our municipal court. I knew when I started this, of course, from the tremendous pressure that had been brought to bear on me, that I was going to have a hard fight. I did not prosecute the small dealers, because I believe that if an ordinance is unconstitutional it is better left to the larger dealers, who can get the best lawyers in the country and who can argue in a better way than can the little fellow's lawyer, and then we can find out if our ordinance is unconstitutional or not.

Well, we went into court, and glass blowers from all over the country were present. They had written to the president of the Glass Manufacturers' Association to come there. He was put on the witness stand and was asked questions something like this: "What is your name?" "My name is ——." "Where do you live?" "New York City." "What is your business?" "President of the Glass Manufacturers' Association." "What do you know about glass bottles?" My attorney objected. The court sustained the objection, saying, "It does not make any difference what a man knows about glass bottles. The question here is, are these milk dealers selling a pint of milk, or a quart of milk, or are they not? That is the question before the court, and not whether glass bottles can be all blown of the same size." So finally the president of the Glass Manufacturers' Association went home, and he wrote me a letter afterwards in regard to some changes in the laws of the State of Massachusetts, and, in the course of his letter said, "This is the same gentleman that came all the way from New York City and testified to his name and address."

I suggested to the court that a fine of \$50 and costs for each short bottle would be about right for them; and for the small dealers who could not stand such a fine, I recommended a fine of \$10 and costs. The court accepted my suggestion, and fines to the amount of \$3,500 were imposed, exclusive of costs, and were collected. The case was carried to the supreme court, and the supreme court upheld the city court, as I said before, in a decision so strong and clear that the case is now used as a standard in upholding the police powers of the cities and villages throughout the State of Illinois. The court held that 1 quart marked upon a bottle meant what it said, and that if the bottles could not be made all alike they could be made to hold a little more.

To-day the large milk dealers of Chicago have a contract with the glass blowers to the effect that a quart bottle must hold "one quart or more;" a pint bottle, "one pint or more;" etc., and a written guarantee to the effect that all bottles must hold full measure or more; otherwise the whole shipment will be refused.

A comparative test of milk bottles made before and after this crusade shows a difference in the capacities of the bottles. The first test, for instance, on 10,000 bottles (we tested many, many more), showed that 3,000 were correct, 2,000 were too large, and 5,000 were too small. The second test, made after I had carried those cases into court and after dealers had weeded out a lot of the short bottles, showed, out of 10,000 bottles tested, that 4,850 were correct, 3,650 were over, and only 1,500 were too small. The milkmen and glass blowers are complying with the ordinance at the present time. I do not say that you can not find short-measure bottles in Chicago, because it would be absolutely impossible, with my limited help, to drive them all out; but under the circumstances, with only 20 men, including myself, I have to do the best I can. We ought to have at least 75 men. I believe that the people of Chicago will soon be, if they are not already, pretty well educated on the question of short weight and short measure.

And, by the way, I say right here that it is only by education that we can get laws through Congress or our States legislatures to stop this short-weight evil. I have told the citizens of Chicago in open meetings time and time again, "If you will give me more help I can save you in money more than your yearly taxes amount to;" and you know how much people in the different communities are protesting against taxes. If you can save them as much as their taxes amount to in a year, it is a great benefit to them and they are going to be with you.

Another ordinance which I had passed and which was carried to the supreme court successfully, was our bread ordinance. The passage and enforcement of this ordinance caused me just as much worry and just

as many sleepless nights as did our milk ordinance. I did nothing but chew bread and drink milk for many weeks. They came, like the glass blowers and milk men, in droves to my office. They were very much interested, of course. They raised their hands in horror and said: "You can not regulate the weight of bread; that is ridiculous. Why, we are losing money on our bread to-day. On every loaf of bread we are selling to-day we are losing money." When these ordinances came up before this committee they were there, and one of the gentlemen, who was manufacturing 62,000 loaves of bread a day in Chicago, said before that committee: "Gentlemen, this is a great hardship." I said, "Of course it is a hardship. It is a hardship on some one to regulate anything. You should do just as you see fit. Give the people as little for their money as you possibly can, and do not at any price let them know how much you are giving them." I will not mention the gentleman's name. He is probably known throughout the East, and he had the audacity to tell intelligent men on the judiciary committee that he was losing 30 cents on every 100 loaves of bread that he was delivering throughout the city of Chicago. I said to the judiciary committee, "Do you believe that? It is a slur upon your intelligence, gentlemen, to listen for one minute to that man." I said, "If it were true you ought to raise a monument to this man immediately in the city of Chicago for his charitable inclinations toward the people."

Well, the bakers claim that bread can not be manufactured and sold for 5 cents a loaf, or for 4 cents a loaf, with a profit. I say to them, and have told them time and time again, that it can be manufactured with a profit at that price. One of the biggest concerns in Chicago, manufacturing several thousand loaves of bread a day, gave me the figures a few days ago, showing that bread costs them $1\frac{1}{2}$ cents a loaf to manufacture. That includes labor, investment, and all ordinary expenses, besides the raw material. Then on top of that comes, of course, the delivery; and I dare say that the delivery will not cost them more than about one-fourth of a cent per loaf; and they are selling it at 4 cents, which gives net profit enough for any man. Still, the poor bakers can not live! This charitable gentleman referred to by me started, for instance, some years ago with the magnificent capital of \$2,000, out in one of our suburbs, and to-day he has bakeries all over the country. Probably his plant in Chicago alone is worth half a million dollars—and still he has lost money!

The cities and villages act gives power to the city council to pass ordinances regulating the size and the weight of bread in the loaf and the quality thereof. We, therefore, as I said, had a bread ordinance passed by the judiciary committee and by the city council. We made the standard loaf 1 pound, but we allowed them to manufacture three-quarter pound, half-pound, 2-pound, 3-pound, 4-pound,

5-pound, and 6-pound loaves. I am not just exactly satisfied with this bread ordinance. When I came before the judiciary committee I fought against the three-quarter pound loaf. I was satisfied in my own mind that if it were allowed the bakers would make that the standard loaf. However, my attorney, the corporation counsel, advised me, and also some of the lawyers on the judiciary committee, that if I did not give the bakers the privilege of manufacturing loaves in as many sizes as possible, the supreme court would probably not uphold the ordinance. The supreme court said at one place that in their opinion the ordinance was not unreasonable, even though it might be drastic, because a variation of sizes is allowed; and probably if that three-quarter pound loaf had not been put in, the ordinance would have been held unconstitutional. However, if the people of Chicago demand that the three-quarter pound loaf shall go I will be the first man to introduce an ordinance in the city council for that purpose, and we will fight it out again, if necessary, in the supreme court.

We said: "You can label it only in pounds or fractions of a pound; you can not label it in ounces." The reason for that is that we have a great many foreign people in Chicago who do not know what 1 ounce or 10 ounces mean; but they do know what a half pound means and what three-quarters of a pound or a pound mean.

There is a penalty provided of not less than \$10 nor more than \$100 for every violation. The ordinance also provides that the weight shall be marked upon the loaf, and the name of the maker and his address must also be put on the label. At the present time some of the bakers are guilty of violating this ordinance in that they are marking the loaves "12 ounces" or "14 ounces," and before I left Chicago I started somewhere in the neighborhood of 10 to 15 suits against those violators of the city ordinance. The baker that I have started the most suits against is the "goat" of the large manufacturers, and has a small shop out in the South Side. Of course, the large manufacturers do not want to appear in this matter, so, as usual, they get a small manufacturer to violate the ordinance so that when suit is brought against him they may again be able to go to the supreme court of the State and try to have the ordinance declared unconstitutional. However, they are going to be fooled on that proposition, because I do not believe that the supreme court would reverse itself on this matter, especially as there was not a dissenting opinion, but every one of the judges agreed that we ought to have a bread law.

And there is nothing, in my opinion, more necessary than to have a bread law in this country. Bread interests every family in the United States; it is the staff of life; and if there is anything that ought to be regulated, it is bread. There can not be too strict regu-

lations on bread. The bakers said to me, "We will raise our price on bread." I said, "I can not regulate your prices, but I can regulate the size of your loaf." I do believe that even though the loaf be a one-half or a three-quarter pound one, some good will come out of it, for the reason that some bakers will manufacture a pound loaf, and competition will then regulate the price. When one man starts to make a pound loaf, some of the rest of the gentlemen will have to follow suit. One of the big department stores of Chicago to-day is making a 16-ounce loaf and selling it for 5 cents, or three for a dime, and advertising it throughout the city. When one big concern makes a 16-ounce loaf, others are going to follow.

The bakers, of course, said that when the price of flour went up they were compelled either to raise the price or else reduce the size of the loaf. I said to them, "But when flour goes down do you ever increase the weight of your loaf?" "Oh, yes," they said, "we do." I said, "You are not telling the truth, because I have investigated your bread. I have weighed it when flour was down, and I have weighed it when it was up, and you have not come up with the size of the loaf when flour was down." So much for bread.

We have had some other ordinances introduced since I became city sealer; for instance, the coal ordinance. It was very common for dealers to give 1,800 pounds for a ton of coal. We got an ordinance through to the effect that they must give to their driver, or whoever delivers the coal, a ticket stating the net weight and the name and address of the purchaser of the fuel, which ticket must be delivered by the driver at the time of the delivery of the fuel. The way we do business is this: Two inspectors will follow a coal man from his yard and request his delivery ticket, and then take him to a scale and get the gross weight of the load and allow him to deliver the coal, and then take him back to the same scale and weigh his wagon and horses, and in that way get the net weight. If the net weight is not what the ticket calls for, he is called into the office, and if necessary, prosecuted.

I want now to tell you how we detect short weight in other lines. Our inspectors are sent out all over the city, and for instance, two of them enter a grocery store and ask for a pound of peas, 2 pounds of sugar, 3 pounds of tea, etc. After they have received the articles they do not pay for them; they simply take the goods and weigh them, because our ordinance reads, "Any man who sells or offers for sale," and that settles it—the offering for sale. We order six articles and weigh them, and if we find that three are short and three are correct, my practice has been in the first instance simply to give them a warning and tell them to do better. If they are short on all of the articles, or on five of them, they go to the municipal court and settle, not with me, but with the judge of the court.

Sometimes we go into stores and find boxes on the floor, and on top of the boxes, a bill for the groceries contained therein, ready for delivery. We weigh all the articles and if they are found short the merchant has to come into the city sealer's office and explain.

It was said a minute ago on the coal situation that in some of the States coal in small quantities was sold by measure instead of weight. In Chicago we do not allow coal to be sold any more by measure. A short time ago an ordinance was passed by the council requiring that all coal must be sold by weight, so that in Chicago to-day every bit of coal is sold by the pound and not by measure. Before that it was the case among the poor people that in place of paying a reasonable price for coal they were compelled to pay an enormous price, soft coal often being as high as \$8 and \$9 a ton. When dealers were allowed to sell it by the bushel, a bushel meant almost anything. We said, "It shall be heaped up." Well, it is easy to heap a coal basket. Take three big pieces of coal and put them in a basket and it will look very nice on top, but look at the holes in the bottom! Therefore it is no more than fair that coal should be sold by weight. The corporation counsel's office advised me, when we introduced that ordinance in the city council, that it might not be constitutional. I said, "Let us try it. Nobody has ever raised any objection, and we are going on." I say to all of you men who are city sealers, that upon your return home go to your councils and ask them to introduce short-weight ordinances; give them notice, and tell them that you mean business, and the merchants and everybody else will want to be your friends in the long run. When I first started out on the short-weight question in Chicago they thought I was the meanest man in the city. But I said to them, "What the honest merchant needs is a city sealer. The man who is underselling you on the corner out here, the man who advertises sugar below cost, the man who advertises potatoes below cost, or any other commodity, is a short weigher in all probability, and that is the man you will have to compete with. You are giving honest measures; you are giving full weights; but that man is not. He is underselling you, and you will have to compete with him." And, in my opinion, that is the way to talk to merchants; and if you talk to them in that way they are going to see the wisdom of having protection not only for themselves, but for the people.

The icemen in Chicago rebelled against selling ice by weight. I said to them, "You must either weigh your ice or be arrested." The great objection to the ice ordinance is that in our city the big ice concerns weigh out to the men every morning a load of ice, say of 5,000 or 6,000 pounds, and allow them to save what they call "beer money" out of that load. For that reason we can not very well get after the ice companies themselves, but have to get after the iceman if he does not give full weight. The way the icemen do in our city is this: The

ice company sells coupons to families, these coupons calling for 50, 100, or 200 pounds, etc. When a man comes to your house and delivers a piece of ice purporting to be 50 pounds you give him a 50-pound coupon. He will probably give you 40 pounds and save 10 pounds. He saves 10 pounds on one delivery, 20 pounds on another delivery, and so on, and all he can save he sells for cash, and that is what is commonly called "beer money." I saw that I could compel the companies to weigh the ice, although I could not hold them for short weight. The first ice company that I requested to comply with the ordinance replied, "If you are going to compel us to weigh ice in the city it will cost us, during the season, from \$50,000 to \$75,000 more." I said, "That is none of my affair if it costs you \$200,000. The ordinance is here, and if you do not obey it I am going to sue you for not weighing ice. You are responsible for your agent, and you must compel your agent to weigh the ice." In a few days they had a directors' meeting at which they finally came to the conclusion that ice must be weighed, and they posted in the different barns notices to the effect that any man who did not weigh the ice would be dismissed. I do not say that all the icemen are weighing ice to-day in Chicago, because it is an impossibility for my inspectors to follow them all, but many of them certainly are.

I am going to speak on only one more subject. I would like to speak a great deal longer if the time allowed and if you would listen to me, but I want to say in conclusion something on the original-package proposition. Nothing, in my opinion, is of such great importance at the present time to the people of this country as is the question of the net weight of original packages. Original packages have shrunk so that they contain practically nothing, or at least very little; and if the packages are going to shrink at the rate they have been shrinking in the last few years, they will contain nothing, in my opinion, except air. For instance, the oatmeal package was originally 32 ounces. First it shrunk to 24 ounces and then to 20 ounces. When a package is first sent out in the market, it is, as a general rule, of a standard size; that is, a pound, 2 pounds, 3 pounds, etc., but after the manufacturers, through enormous advertising, have created a demand for their goods, then they shrink the package. Who pays for this enormous amount of advertising? Nobody except the retailer in the first place and afterwards the consumer.

In Chicago all fruits and all berries are sold by the box or by the basket. We have no regulation on that important subject. We will have it, however, if this ordinance goes through which I spoke of before. At the present time they are sold by the package. Take berry boxes, for instance; the bottom is in the middle of the box. I have not been able to figure out the reason why the bottom is in the middle of the box, except that it may be done for convenience, so that

they do not need to look to see which is the top and which is the bottom in filling them. Somebody sent to me, through the mayor of Chicago, what was supposed to be a pint box of berries, and it contained exactly 10 berries. The mayor forwarded the box to me with the request that I do something about it. If we had some regulations I might do something, but dealers can put one berry in a box if they see fit and say, "Here is a box of berries." "Box of berry" it would be; not "berries."

I think a resolution ought to be passed indorsing the stand that the Bureau of Standards has taken in advocating in Congress a net-weight bill. This will probably come up for discussion this afternoon, but I will say now that I do not agree absolutely with them in their bill. In reading the bill over last night I noticed that they have the word "approximate" in it—the approximate weight. Now, what does "approximate" mean? "Approximate" means anything. What would be approximate to you might not be approximate to me. Dealers might state then on their packages, "10 to 12 ounces." That would be an approximation. They may say "about 12 ounces." That would be an approximation. I think that that word ought to be stricken out. If the "tolerance" as stated in the bill is to be left to a commission, I say let the commission decide how much "approximate" shall be, because tolerance and approximation probably have the same meaning; but do not let us have the word "approximate" in the bill, because, in my opinion, you would not be able to get any convictions under the bill.

In conclusion, I want to say that I am very glad that the Bureau of Standards has taken up this work. I congratulate the Bureau of Standards for the great scientific work that it has done in the past. Building up such an institution as this in eight years, as I understand, is something wonderful, and the men are entitled to the greatest credit for that work. But I congratulate them still more upon the work that they are undertaking to do; and I say to you men here that in place of Congress appropriating \$10,000 for the Bureau of Standards to undertake this immense work throughout the country, to encourage the establishment of State sealers and city sealers if necessary, and to find out the real conditions existing throughout the country, it ought to appropriate at least \$50,000 or more. It is a thing that is of greater importance, in my opinion, to the public, than any subject that has been taken up for a long time. And, gentlemen, if we here assembled to-day can in any shape or manner, get a net-weight package bill through Congress, we will do more for the people than any set of men has done for a long time. And when the bill goes through, we may congratulate ourselves upon what we have done in this matter.

I have taken a great deal more of your time than I expected to, but I am a fanatic upon short weights, and that is the reason I have talked so long. I thank you very much.

The CHAIRMAN. I have always thought that this question of weights and measures was contagious. In fact, I know it is contagious; and I think we have been well and amply repaid for this meeting, and for our journey here, by the infection that we have received from this one speech alone.

I quite agree with Mr. Kjellander that the amount of money given to the bureau is small, but there has been such a great cry of economy in the last few years it seemed to us better to get a moderate sum and show the necessity for it; and if we get results from that, I have no doubt that Congress will stand by us.

The SECRETARY. I would like to say a word in reference to that word "approximate," appearing in the bill referred to. The bill as presented by the bureau to Congress did not have that word in it. The gentleman who presented the bill insisted that it ought to be there. Dr. Stratton delegated me to see him and have a talk with him about some other changes, and he was quite positive that it was necessary. I did not agree with him. It seemed to me that if a commission was appointed to establish regulations it should have ample power to specify what the tolerances should be.

The CHAIRMAN. It seemed to us to be unwise to insist too much on little things; but I know, from my personal knowledge of this gentleman, that he will be very ready to listen to arguments. It seemed to us better to make that concession for the sake of getting the bill introduced.

Mr. KEMMERER. Mr. Chairman, I would like to ask Mr. Kjellander one question, as we are considering an ordinance in regard to coal. Is any allowance made for difference in scales, and how often are scales tested?

Mr. KJELLANDER. Every six months. The law compels us to test those scales every six months; they are sometimes tested oftener. In our ordinance there is no allowance made. That is left entirely to the judgment of the head of the department. You have to take everything into consideration, and we may allow sometimes 30, 40, or 50 pounds on a big load.

This is what I have against tolerances and against allowances. If you fix an allowance or give a tolerance, dealers will take advantage of it all the time. For instance, if you allow 50 pounds in a ton of coal, in place of giving 2,000 pounds they are going to give 1,950 pounds. Probably with original packages we will have to do something of that kind; but wherever you have an ordinance introduced, my advice to you is to use your own judgment about tolerances and allowances, but do not specify it in your ordinance.

Mr. KEMMERER. The ordinance first proposed by our council was practically against the coal man. When it came before the ordinance committee, the city attorney, who was chairman of that committee, raised the question that if the coal dealer was dishonest, why were not all the other merchants dishonest in dealing in all commodities. They had an allowance then of 30 pounds on the ton for differences of scales. Taking the scale out in the open in the winter time, with ice and snow around it, 30 pounds was thought to be a good practical allowance. But instead of sending that bill to the council they took it out entirely and put in the bill that I mentioned some time ago.

Mr. CLUETT. Mr. Chairman and gentlemen, I came down here with Mr. Kjellander more to be a listener than anything else. My position as chief deputy sealer also includes that of a private scold, information to the public being given out by Mr. Kjellander himself, and I think he has covered the situation in Chicago pretty thoroughly.

The CHAIRMAN. The State of Kansas is represented by Prof. M. E. Rice, deputy State sealer. We will all be very glad to hear what they are doing in Kansas.

Mr. RICE. Mr. Chairman and members of the conference, I came here like most of us, I believe, to listen to talks by those who have had more experience. Kansas has had comparatively little experience with weights and measures or with the enforcement of regulations concerning them. During the last year, however, I think the legislature has done as well as we could ask in passing new laws on weights and measures, and I think those laws will probably enable us to do a great deal of good work. They have, fortunately, left in the discretion of the State sealer the fixing of tolerances. The law does not specify these, so that it is a question of the judgment of the State sealer's office.

I noticed one feature in the law a few weeks ago that is perhaps novel, and I want to read it to you.

The State sealer shall keep a record of all the weights and measures, balances, or other measuring devices sealed or condemned by him, and shall make an annual report to the governor on or before January 1 of each year, and copy of which report shall be filed with the National Bureau of Standards.

Evidently the aim there is to keep this State administration in touch with the national bureau. A copy of that report I gave to Mr. Fischer a little while ago.

I have some copies of the law here which I will give to those of you who are interested, and if you notice any feature which is particularly good, or which is objectionable, it would be an accomodation to the Kansas people if you would call my attention to it.

One undesirable feature is this, that there is no State sealer of weights and measures whose chief business is that of sealing weights and measures. The law prescribes that the chancellor of the State

University shall be ex officio State sealer of weights and measures, and that he shall appoint a deputy who shall be a member of the faculty of the State University, and who shall receive no other compensation than his faculty salary. This, of course, robs the office of some of the enthusiasm which it would have if it were an independent office. But I believe that the university will have to do in that regard what it has done in some other lines of work, i. e., relieve the instructor of practically all his teaching, and make him essentially and purely a weights and measures man. That is entirely possible within the letter, and, I believe, the spirit of the law.

The county clerks are made by law sealers of weights and measures, and also inspectors of weights and measures if they see fit to inspect, but they are not compelled to inspect. Municipalities may create departments of weights and measures, which departments are co-ordinate in authority with the county clerks, and are subject to any regulations which the State sealer may see fit to issue. So, if they see fit to act, we would have the county clerks as inspectors and sealers.

In some of the cities the municipal sealers and inspectors are doing good work, but there is no State-wide inspection by the weights and measures department as such. But we have this provision which takes its place to a considerable extent: That the State board of health inspectors are ex-officio inspectors of weights and measures, though not sealers. They can condemn faulty weights and measures, but can not correct or seal them. This provision is just beginning to have its effect now, as the inspectors have had their outfits sealed by the State sealer only within the last four months; and we are beginning to hear from it by faulty weights being sent into the office for adjustment and sealing where there is no local man who can do the work. The State board of health has confined its attention practically to the weights and measures which it encounters in the grocery stores and other stores dealing in food and drugs for human beings. They have not gone into the grain stores or others of that kind.

There is one question that I would like to bring up in regard to the county clerks getting sets of standards that can be approved by the State sealer. We have prescribed in our regulations the limits of tolerance that we will permit in the county standards and the limits of tolerance that will be permitted in inspection work. Now, the fundamental object in that inspection work, as I understand it, is to make the commercial quantities measured out to the consumer reasonably correct, and that is to be accomplished, so far as the scales are concerned, by the county standards being more accurate than the commercial weights and measures that are checked by them. I just noticed the discrepancies between the tolerances of county

standards and of the corresponding commercial weights. For instance, in the tolerance table, as issued for commercial work, a 10-pound weight must be within one-eighth of an ounce (these tolerances are not established by law, but are office rulings), while the tolerance for a 10-pound county standard is seven-tenths of a grain. So the commercial tolerance here is 55 grains, and the allowable error in the standard for the county is seven-tenths of a grain. Now, it is this 55 grains that we are really interested in, and not the seven-tenths of a grain. This seven-tenths of a grain requires the county clerk to have pretty high-priced apparatus. Personally, I want to raise the question whether we could not accomplish more good by lowering the accuracy of the county and local standards a little and slightly raising the accuracy of the commercial weights and measures, so that the ultimate commercial tolerances would be the same, but the expense of the county standards would be very much less. The county commissioners say, when they learn that \$400 or \$500 are necessary to get the prescribed county outfit, "Well, we will not order it," and that is the end of the matter. The question is whether we can not wisely lower the exactions of the county and local standards so that they can be met by well-selected, first-class commercial goods that would do for all the ordinary testing and inspection, even if some of the most careful work has to be sent to the State sealer's office.

A year ago a circular letter was sent out from the State sealer's office in regard to the equipment of the various counties. Very few of the counties reported any appreciable equipment, and what they have is frequently found to be more or less mildewed or rusty.

A few of the cities have inspectors who are doing good work. In October we issued a little pamphlet on weights and measures regulations. We sent them to all the county clerks, local sealers, county attorneys, and county commissioners, sending out about five or six hundred copies. We have about 400 copies left for the merchants and dealers in the larger cities who have been sending for these and trying to become familiar with what is legitimate.

I think the spirit in Kansas is right in regard to the subject of weights and measures, but it is a little too early yet to judge definitely the success of the law we have just passed. I want to agree very strongly with what has been said by one of the preceding speakers, that whether we have a perfect law or not, before we attempt to change it we must see what we can really accomplish under the existing law; and I think a great deal can be accomplished under the present law, especially if the State University should decide to relieve the deputy sealer of his entire work of teaching, so that he could become to some extent an inspector and visit the different parts of the State.

I think that is all I wish to present at this time, until specific matters come up for discussion. I shall be glad to answer any questions, however, so far as is possible with our limited experience.

Mr. REICHMANN. Have you made any convictions so far?

Mr. RICE. No; we have not, directly. The State food inspectors have made some convictions for faulty apparatus and short weights.

Mr. PALMER. Mr. Chairman, I would like to ask Mr. Rice what his experience with the enforcement of the bread law in Kansas has been.

Mr. RICE. Nothing, so far as the State sealer is concerned.

Mr. PALMER. Have there been any local convictions or attempts to enforce your law?

Mr. RICE. No; but I understand that the State board of health is getting after that, and that the convictions on that line will come from the board of health.

Mr. STIMPSON. If you will allow me, I will say a word in regard to that, as I had a conversation with one of the board of health inspectors when I was out there. The bread law in Kansas was referred to the district court of Leavenworth for a decision as to its constitutionality, and the law was upheld. Whether the case has since been appealed to any higher court I can not say.

Mr. REICHMANN. Do these food inspectors who inspect weights and measures in grocery stores make any report at all to the weights and measures officer as such, or do they make all their reports to the department of weights and measures?

Mr. RICE. They are compelled to keep a record of the weights and measures inspected.

Mr. REICHMANN. But does the law state to whom reports shall be made?

Mr. RICE. I understand a report is to be made to the State sealer. The chancellor asked me about that a month or two ago, and I think he ruled that so far as the State sealer's office was concerned we were interested in the total number of weights and measures inspected and in the detailed report and identification of the incorrect weights and measures.

Mr. STIMPSON. It is provided that county and municipal sealers and other persons authorized shall keep records of all weighing and measuring devices inspected, sealed, and condemned, giving the name of the owner or agent, the place of business, the date of inspection, kind of apparatus, and whether sealed or condemned, and shall make an annual report of the same to the State sealer before September of each year.

Mr. RICE. For instance, an inspector goes into a store and tests 40 weights. Of those 40 weights we will say 38 are correct and 2 are incorrect. Would it be sufficient to specify the 2 that are incorrect, or would he have to specify in detail each of those 40 weights? ,I

think the chancellor's ruling was that for the present we would ask the State food inspectors to report the total number of weights or measures tested in each place and specifically report the faulty ones. When they find a faulty one, they tag it with a "condemned" tag, and it goes to the county sealer to be adjusted and sealed, if there is such a person; otherwise it comes to our office to be adjusted and sealed.

The law prescribes that the State sealer shall seal, without fee, all weights and measures sent to him from the county clerks or the city sealers, or any official sealer or inspector, and if private persons send weights and measures in to the office, then he shall receive the same fees as a local sealer would receive for testing and sealing. If the measures require adjustment, he shall receive a reasonable compensation for adjustment. As I say, the law has not been in operation long enough to create a routine method. The few private weights that have come in I have either fixed myself or hired some one to fix at so much per weight, and then sealed them and returned them.

Mr. REICHMANN. Mr. Chairman, I move that we take a recess until 2 o'clock.

The motion was carried and, accordingly, at 1.25 p. m. a recess was taken until 2 o'clock.

SECOND SESSION (AFTERNOON OF FRIDAY, FEBRUARY 25, 1910).

The conference reassembled at 2 p. m.

The CHAIRMAN. Mr. Rice, have you anything further to say?

Mr. RICE. I have just one further statement to make. I wish to emphasize what Mr. Kjellander said. We have one paragraph in our law in regard to variations in measure which reads: "A slight variation from the stated weight, measure, or quantity for individual packages is permissible, provided this variation is as often above as below." This leaves it a little indefinite, and I simply want to emphasize the point that if you are framing a new provision you will have to watch that point pretty carefully. We have already lost one or two cases on account of the uncertainty of that statement.

The CHAIRMAN. The next State is Maine. I understand that the delegate from Maine says he has no report to make at present, but may speak later. The next is Massachusetts. We are always glad to hear from Mr. Palmer, State commissioner of weights and measures, and we know we are going to hear something interesting.

Mr. PALMER. We have made some progress in Massachusetts during the past year. As I have explained at previous conferences, the law of Massachusetts is a very old law. One of the earliest acts in our colonial records was that in regard to weights and measures. Additions have been made from time to time, and it is our intention at some later date to remodel our State statute. Our legislature, I have no hesitancy in saying, is perfectly willing to do whatever we ask them to, within reason, on this subject; and I hope that before long we will have some suggestions from the Bureau of Standards in regard to such legislation, in order that we may have, with some of the other States, model State regulation. I have been much interested in the report from Kansas, because I know that they have to some extent adopted some of the recommendations made by the Bureau of Standards, and I hope that before long we will hear more of the results of their experience in the matter.

The legislature of 1909 made some changes in our law. Our bread law provided that signs stating the price and quality of loaves of bread should be conspicuously placed in stores selling bread, and also in the front windows of the stores. The latter proviso seemed to be unreasonable, owing to the fact that our large department stores had delicatessen departments where they carried bread, and it seemed unfair that a dealer should be required to place a sign, stating the

price and quality of bread, in the window with women's underwear, corsets, and other things which are usually displayed in places of that kind. The amendment, changing the law, was adopted without opposition.

In Massachusetts we have a condition which I presume is just a bit different from what exists in any other State, with perhaps the exception of Rhode Island. In the early law it was provided that county treasurers should act as county sealers. The law also provided that each city and town should have a sealer. We have enforced the provision that each city and town should have a sealer, and that he should enforce the law to the best of his ability. The provision that the county treasurer should act as county sealer seemed to be unnecessary, and has been repealed. I might add that Massachusetts furnished each city and town and each county of the Commonwealth with a set of standard weights and measures, which were considered very beautiful pieces of apparatus in the days when they were made, some 70 years ago. These were placed in a large cabinet, and in a great many places appeared to be objects of interest in the county offices. Several of our small towns—of one or two stores—had their standards destroyed by fire, and it was somewhat of a hardship for those towns to pay \$500 for a new set of standards, as that is what our sets now cost. I saw the opportunity to abolish the county sealer and to provide for the return of the apparatus to the State, and made that recommendation to the State legislature, which was adopted. We are now having those standards returned to us, and after remodeling them will supply them to the small towns which are without standards. Of course they pay a small charge for them, about \$150, but they answer every purpose. So that the county supervision is practically done away with in Massachusetts at the present time.

Another act provided for an amendment to the berry law. We have a law, as you undoubtedly know (I have two or three copies of our State compilation here and I should be very glad to send additional copies to those who may desire them), providing for the sale of berries in certain packages; that is, in standard quarts, pints, and half pints. By some oversight blueberries and raspberries were omitted, and the legislature, as the result of a suggestion which I made, included those berries.

In 1909 we adopted another very important piece of legislation which provides for the inclusion of all sealers of weights and measures in cities and towns of over 10,000 inhabitants in the classified civil-service list. I think that is one of the most important pieces of legislation that we have put on the Massachusetts statute books in regard to sealers of weights and measures, and we already learn that it is producing good results. This is the first year, of course, that

reappointments of the sealers have not taken place, and there has been great political influence brought to bear to have men appointed to one or two cities which have lost sealers; men who were entirely unsuited for the duties of the position.

In our State statute we have also provided for supervision of scales, weights, and measures which are used for the purpose of buying or selling. In the enforcement of the law we found that the inspection of the "penny-in-the-slot" (as we commonly call them) weighing machines, thousands of which are used all over the country, did not come within the statute, and rather than take the matter to the supreme court, the law was changed.

There was another case where we had city weighers' scales, of which you have probably all heard, scales which are used by the men who are called city weighers for the purpose of checking up customs weights for importers, and in Massachusetts and other cities of the country there was practically no supervision of these. These men were not even appointed by the cities, and they operated as they saw fit. There was no official supervision of any kind either over the men who did the weighing or over the apparatus which they used. There was no guarantee to their employer that their apparatus was correct, and quite often they produced a different result in their weighings from the customhouse people. It appeared very important, therefore, that these scales should be inspected, and a statute was enacted which provides that the sealing laws shall apply to all weighing and measuring devices used for the purpose of weighing or measuring for hire or reward, which is very broad, as you can see, and takes in about everything that was not taken care of before.

The law in regard to the sale of kindling wood was slightly amended.

Chapter 531, acts of 1909, relative to the sealing of glass bottles and jars amended the existing statute to allow for the use of what is known as "manufacturers' seal mark." I can not point with any degree of pride to this particular legislation, because I am ashamed of it myself. It was passed as the result of a petition of a large number of bottle manufacturers in the State of Massachusetts. Our old law provided that all glass bottles used for the sale of milk or cream should be sealed, and provided for tolerance; and unfortunately we have tolerance below the standard as well as above. There is a question in my mind as to whether or not this is constitutional, and this question may be submitted to the courts at a later date. I have asked the Bureau of Standards for their interpretation of the statute, and I believe they have submitted the matter to their law officer. I trust their opinion will be forthcoming at a later date as to whether or not the State has authority to establish tolerance.

Mr. KJELLANDER. I beg your pardon, the Illinois supreme court said that they had not.

Mr. PALMER. I am glad to learn that. Of course it was somewhat of a hardship for dealers to have all of their bottles sealed; and these manufacturers came forward, with the cooperation of some of the dealers, and asked our legislature what appeared to be a fair proposition, for permission to bring into the State of Massachusetts their bottles and guarantee that those bottles did come within the prescribed tolerances; and to show that they had acted in good faith they would put their name or any mark designated by the State commissioner on the bottles. They also asked that the bottles that came in under those conditions should be exempt from sealing by the local sealer. The original bill which they drafted was called to my attention, and my first suggestion was that there was no penalty provided for the manufacturers for evading or not complying with the law. They finally agreed to a provision which was added to the bill to the effect that the manufacturers would be required to file a bond with the State commissioner of weights and measures, and in case they did not comply with the conditions of the law the bond would be forfeited. I do not know of any person in Massachusetts making milk bottles, as they are all made outside of the State. Of course it would be almost impossible for us to prosecute a manufacturer in Pennsylvania or other States under this law. On general principles I appeared in remonstrance to this bill, and it was referred back to the committee three times. Any legislation introduced in Massachusetts must have a public hearing and be passed upon by the committee; it can not be killed in the committee.

The committee on mercantile affairs who heard this bill appeared to be impressed with what I said. In our State we have a law which prevents a State officer from attempting to influence legislation, and as I did not want to violate this statute I could not appear too prominently in connection with the consideration of this bill. The bill was finally passed in its present form, which does not include the clause to the effect that a bond should be filed.

In accordance with the requirements of the statute, I issued certain designating marks, and the manufacturers appeared to be observing the law. Recently, however, we began to make investigations and found quite a number of bottles bearing "manufacturers" seals blown into the bottle which tested from 2 to 5 drams below the tolerance allowed by the State statute. In view of these facts, I am of the opinion that our next State legislature should be asked to abolish tolerances entirely. Legislation of that kind seems to be prevalent in other States, namely, that bottles must hold a quart, pint, or half pint.

Chapter 541, of 1909, is an act relating to taximeters. Massachusetts, I suppose, is the first State to adopt legislation in regard to

taximeters. I say that with confidence, because I have written all over the country and failed to find any place where they inspected these devices.

Mr. KJELLANDER. We are testing taximeters at the present time. We have a machine that we are testing them with, and when I left Chicago we had tested about 75 of them.

Mr. PALMER. That is under your department?

Mr. KJELLANDER. Under my department.

Mr. HASKELL. It is the same here in the District.

Mr. KJELLANDER. We will have them all tested within 8 or 10 days from now.

Mr. PALMER. I am glad to know that. We have had quite a number of complaints about the taxicabs used in Boston. These cabs have been used in our State for about two years without supervision or inspection, and as many complaints were made as to their inaccuracy I called the matter to the attention of our legislature. At that time taximeters were used in three or four cities in the State, and in some places there were only two or three used. Boston had the majority of the meters used, and it seemed a hardship to require that all cities go to the expense of establishing courses and examining into this intricate device, as we found it to be. The legislature, therefore, adopted a statute placing this supervision in my department.

This is the way taximeters are inspected: We first satisfy ourselves as to the accuracy of the general type of the meter itself. We have established mile testing spaces in different sections, the different divisions of the mile being marked. The cab to be tested is brought to the starting-point and run over the measured space four or five times, as may be necessary. If the meter is correct, the department seals it; and if it is incorrect, it is condemned. The first testing, which was done by the department about six weeks ago, showed a wide variation in the meters. According to a local ordinance in the city of Boston (the charges are all governed by ordinances), persons using a taxicab are entitled to 6 minutes waiting time for 10 cents. It was discovered that for the first 30-cent charge which was thrown over for waiting, instead of getting 18 minutes, as they should under the law, they were getting only 12 minutes. That has been going on in Boston and every other city in the Commonwealth ever since they have been used.

The cabmen objected very strenuously to some of the rules. We found that other cities had established quite an elaborate system of rules, for instance, that meters shall be illuminated. I believe Chicago provides that they shall be illuminated.

Mr. KJELLANDER. They have agreed to do it in Chicago.

Mr. PALMER. I thought when we started the enforcement of it that the companies would object to it most strenuously; but they have all agreed to it.

Mr. GOODWIN. Mr. Palmer, I would like to ask you a question regarding this taxicab business. Do I understand that persons are charged by the time limit that they are using the cab?

Mr. PALMER. They are when they are waiting. It is what they call a waiting charge; that is, when the cab is not in actual operation or traveling. If you go shopping and stop at a store, for instance, while you are in that store you are charged for the use of that cab 10 cents for every six minutes or fraction thereof.

Mr. GOODWIN. Is there a maximum or minimum charge for a certain distance?

Mr. PALMER. Yes, sir; we have in Boston two tariffs, first and second, for two or more than two persons. The first is 30 cents for the first half mile and 10 cents for each additional third; the second is 40 cents for the first half mile and 10 cents for each additional quarter.

Mr. KJELLANDER. In Chicago we compel them to carry four passengers for the same rate as they carry one passenger. That is, we have done away with tariff 2, as they call it. We came to the conclusion that under tariff 2, if the chauffeur was dishonest, or if the company was dishonest, any man who took a taxicab naturally would think if there were two passengers and he saw "tariff 2" there, that it was for two passengers, whereas it was for three or four passengers—and that is the way they used to cheat in Chicago. So we did away with tariff 2, and the charge is now the same for three or four as for one person.

Mr. HASKELL. That same matter came up in the District here, and we did away with what we call the "double charge," so that one passenger or five passengers are now carried for the same price. The idea was that the driver, if he was so inclined, would pull his flag down and charge a double tariff where he should charge a single tariff.

Mr. PALMER. I think that is what will eventually be done in Boston. The largest taxicab company has already changed voluntarily. I speak particularly of taxicabs at this time for a reason. I want to illustrate an inquiry that is quite often made to us. People are surprised and say, "Why, how do taxicabs come under your department?" We say, "They use a measuring device." That is the story in a nutshell.

But the Bureau of Standards, you know, goes even further in that line and says that the commissioner, or whatever he may be, should have charge of the supervision and inspection of water, gas, and electric meters.

The CHAIRMAN. He should have.

Mr. PALMER. We have at the present time an agitation of that same question in the city of Boston. We do have State supervision of gas meters and have had for some years. That is under the supervision

of the board of gas and electric light commissioners, and the inspectors are called State inspectors of gas meters. I am not prepared to say that it is entirely satisfactory. I know from my own experience with a gas meter which I have in my house that I have had considerable difficulty in having it tested. One of our citizens is very much worked up at the present time over what he calls "demand" electric meters. I am not sure that you know what that is. It is additional to the regular electric meter used by the electric company for determining the amount which shall be charged to the individual. It seems that these have never been supervised, as there is no inspection of them, and this man states that he has found the greatest discrepancies in them. He claims to have been overcharged by the electric-light companies, and the matter is under consideration now, as he has petitioned the governor for a hearing on the matter.

Mr. GOODWIN. I would like to ask you a question in regard to the testing of the gas meters. Does that come under your jurisdiction?

Mr. PALMER. It does not.

Mr. GOODWIN. Is there any law providing for such testing?

Mr. PALMER. There is a law, as I say. It comes under the supervision of the gas and electric light commission of the Commonwealth. Now, unfortunately, our gas and electric light commission is not paid by the State, but by a direct tax in addition to all other taxes assessed upon the corporation. We have the same thing existing in our board of railroad commissioners. Both boards are composed of splendid men, etc., but I think the principle is entirely wrong.

Mr. GOODWIN. Do you have inspectors that any citizen can call on to inspect a meter?

Mr. PALMER. We have, presumably; but, as I say, I do not think the service is ideal, or entirely satisfactory.

We have a bill before the legislature in relation to the sale of coke. We sell large quantities of coke, and have established laws with relation to the sale of coke. This is simply an amendment to the general law, and provides that coke amounting in quantity to 100 pounds or more shall be sold or delivered in measured bags or baskets, as described in this section, or by weight, with the certificate of a sworn weigher, as provided in sections 87 and 88. It practically puts coke under the same provision as coal.

For the benefit of those who do not know, I will say that we have had for some years an organization of the local sealers of weights and measures of the Commonwealth, who style themselves the Massachusetts Association of Weights and Measures. We have annual or semiannual conferences in regard to weights and measures, similar to the conference we are having here to-day. We had our last meeting some time in January, while the legislature was in session, and

I think we had 92 present; so you see we had a good representative gathering from all over the State.

Our legislature is also considering an amendment to the bread bill, in which I know Mr. Haskell is interested. It provides that bread shall be sold by weight, in full or half loaves, and not otherwise. Briefly, it does away with the three-fourths and one-fourth loaves. We are confronted by this condition in Massachusetts. The bakers instead of selling a 32-ounce loaf, sell a 28-ounce loaf and call it three-quarters.

Mr. GOODWIN. Do you find any bread that is over 28 ounces?

Mr. PALMER. Very rarely.

We also have an amendment to the cranberry law, but I do not believe you would be interested in that.

Then we have another amendment which provides that the fees which are now charged for sealing weights and measures shall be done away with, and that all sealing of weights and measures shall be performed without cost. Personally, I am very much in sympathy with this. I do not know whether we are going to be successful in passing it or not. In a good many small towns there is objection to establishing salaried offices. Under the old statute the fees were very small, but we have never attempted to have the fees revised, for the reason that I hope eventually they will be abolished.

Our house bill No. 799 is a bill relative to marking articles of food sold in sealed receptacles or original closed packages. I do not know that we will be able to pass that bill. The State department made no recommendation in regard to it, although we did indorse the proposition last year. At the hearing last year it developed that almost all of the packers of the country and the canning people were against it. They came in swarms, with paid counsel, the best attorneys in Massachusetts, and did everything they could to defeat the bill, and they were successful.

I hoped that by this time the National Government would take up this question so that the different States would not have to go through this fight, which I know each one of them will have to, in case the matter is brought before their legislatures, because the manufacturers are well organized; they have immense capital and will devote a lot of time, money, and energy to defeating any legislation of that kind.

We have another amendment to our coke and charcoal bill. The law provides that local sealers of weights and measures can reweigh coal to ascertain if each load contains the required amount in accordance with the certificate which the driver is required to carry and which is signed by a sworn weigher. After coal is weighed the driver is required to return to the scale that the sealer may determine the weight of the vehicle, because the judge of the superior court

ruled that the horse was not a part of the vehicle. In some cases we have scales with platforms large enough to weigh the horse and wagon, in other cases only the team. I think our general coal law is a good one, but it has this defect and I think it will be remedied by the legislature.

Another bill provides for the use of paper bottles and jars. The Single Service Package Corporation is attempting to introduce into general use a paper milk bottle, this bottle to be used only once and then destroyed. It is their intention, I believe, to go into every State in the country where milk is sold in bottles. They are having their "try out" in the State of Massachusetts and the matter was referred to me for my opinion as to whether they could deliver milk that way under the present law. I told them they could not, and they went to the legislature and asked that the statute be changed. I am in favor of the bill, as I think the package a good one. I had hoped that one of the packages would be here to-day, but I believe Mr. Fischer says he has none. It is somewhat similar to a mailing tube, and the milk is placed in this receptacle. It is of cardboard coated with paraffin.

Mr. GOODWIN. Mr. Palmer, may I ask you a question? From a sanitary standpoint don't you think that would be a good thing?

Mr. PALMER. I think so. I am highly in favor of it and so stated to the committee. We have also included in the bill a clause providing a penalty for refilling a bottle. I think you will all have this same thing brought to your attention in time. I have no interest in the sale of bottles of this kind, but I am very much in favor of the adoption of such a package.

Mr. KEMMERER. We have had that package brought up before the board of health and it was disapproved because of the fact that there is no way of seeing into it to find out what it contains. You do not know what the condition of the inside of the bottle is. It has been demonstrated by our board of health also that the bottles are refilled; that they have been refilled; and the question arising there was whether the paraffin on the bottle would not come off after it had been used once and whether the paper would not be in such shape as to contaminate the milk or whatever else might be put in the package.

Mr. GOODWIN. Just one other question. I would like to inquire if there is a sealing process that comes with this bottle, so that once sealed it can not be used again.

Mr. PALMER. This bottle under our State law would be used under the same clause I referred to—relating to the manufacturers' seal. The manufacturer will say that this bottle has been tested and manufactured under certain conditions. As to Mr. Kemmerer's statement, that question came up in the State legislature. They had one of the finest bacteriologists of the country there and he showed some results as to tests which he had made with regard to these bottles,

and the committee was very favorably impressed with them. As I have already stated, it is an offense to refill bottles.

Mr. GOODWIN. Wouldn't this be a very good case for prosecution? If an inspector should take a bottle to his place of business and open it in the presence of some other person, and if it was found to contain impure milk, wouldn't that be absolute proof that the furnisher of that milk had violated the law?

Mr. PALMER. I should say so—prima facie evidence.

Mr. KEMMERER. There would be a question as to whether he bought the milk from somebody else or not.

Mr. PALMER. We have a force of inspectors who do nothing else but collect samples of food and drugs. Our supreme court has held that, regardless of whether a man has obtained the milk from somebody else, if the milk is below the standard, the man who sells the milk is responsible. Now, as a result of agitation, we have just adopted in the city of Boston an ordinance to the effect that milk can not be sold in open receptacles. It has been the practice for dealers to have a 10 or 15 quart can of milk and then fill quart cans from that, and the result has been that this measure would become loaded with microbes from lying on a dirty counter or some other place.

Another bill provides for a standard barrel of apples, and another for the bushel weight of certain commodities which have not already been established by law in our State. The merchants in our State are very much in favor of the adoption of a standard of weight for bushels of almost every commodity that they sell, and although the proposed bill does not include everything, it is a desirable addition. We have also another bill, which provides that all fruits, vegetables, and nuts, shall be sold by dry measure, weight, or count. I doubt very much whether that will pass. We are not as fortunate as Illinois; I believe Illinois is quoted here as having a State law.

Mr. KJELLANDER. That is merely an enabling act.

Mr. PALMER. Unfortunately, we have the Fruit and Produce Exchange of the city of Boston, a very powerful organization, against us on this measure, but I think within a few days they will come forward with some kind of a compromise measure and that we will be able to pass it.

House bill 188 is another bill on the same line.

That, Mr. Chairman, is a statement of the general legislation before us now and which we had last year.

The work of the State department has continued; we have gone on just the same except for one thing. I have a force of four inspectors, who make inspections of weights and measures with regard to the enforcement of the law by local officers, and also look out for the enforcement of the laws against false weights and measures. It has been our practice heretofore simply to make records, and when the

inspector returns to the office, which he sometimes does not do for a week, he will submit a detailed report of the conditions in certain towns, and also a detailed report as to the places where he made examinations. Under this system, when I get around to write the local sealer in regard to violations the inspection is sometimes two or three weeks old. Recently we have adopted a triplicate system of inspection blanks. One of these blanks bears the coat of arms of Commonwealth and is signed by the State inspector. This copy is left with some individual at the store or wherever the inspection is made. Under the old system the inspector would leave word with some clerk; the clerk repeated the message to his employer, or sometimes he would forget to do it, and as a result, in a good many cases, the efficiency of the inspection force was a great deal hampered by the fact that the proper person did not receive the notice. The remaining blanks are returned to the State department every day. One is kept as a record in the department, and the other, which is on tissue paper, is sent to the local sealer. His attention is called to the violations of the law, and he is requested to attend to whatever details are necessary and make a report to the State department at once. The new system has worked wonders with us. It shows that the department cooperates with the local sealers of weights and measures. The local sealer likes it, because it shows that somebody else is interested in his work; and the moment a man gets this notice he takes the scale, or whatever it is, and goes to the local inspector's office.

We have had this system in operation about 35 days, and it has accomplished more, I think, than inspections made in any two months under the old system.

I think, Mr. Chairman, that those are the general conditions of Massachusetts, and that is all I have to report at this time.

Mr. KJELLANDER. Mr. Chairman, let me say just one word. I believe that the law of Massachusetts, so far as milk bottles are concerned, is no longer possible of enforcement. I think all laws of a similar nature are impracticable. Just think, if it should be required in Chicago or New York that a sealer test and seal all of the milk bottles! Why, it would be an impracticable task. You could not do it without hundreds of men. Now, in Massachusetts and some other States they say, "Let the manufacturers seal their own bottles." Isn't that absurd when you come to think of it—to trust those fellows with sealing their own bottles? They can not be trusted, in my opinion. We have had experience in that way, and they can not be relied upon. They do not want to be fair on this matter. They never showed any fairness; at least they did not show it to me.

If a man selling milk does not give full measure he is clearly guilty of a violation of the law; and if you prosecute him—be the concern

ever so big—and obtain a conviction, that concern is going “to come to time.” It is not going to be bothered and brought into court repeatedly, but it is going to require bottle dealers to deliver bottles that are not short in measure. I think that is the method that we should pursue, even though it may seem a little harsh to start in with—to hold the man that sells the milk.

In the original package business, for instance, suppose that the manufacturer of cartons for breakfast food does not make them large enough. Ought we to hold him? We ought to hold the manufacturer of the breakfast food, not the manufacturer of the carton. So I think you are on the wrong track in this matter.

Let me ask you a question for information, Mr. Palmer. How have you succeeded with your berry boxes, and how do you handle that business? Do you have standard size boxes?

Mr. PALMER. Our law provides that berries shall be sold in standard quart, pint and half-pint packages. Massachusetts is the pioneer in that, and unfortunately we encountered all kinds of difficulties. A great many berries for the Massachusetts trade come from the State of New York and we have the present New York law to contend with. The present law, as Dr. Reichmann will probably tell you, allows a variation of 7 per cent below or above.

We have had considerable trouble with milk bottles, and I want to say, Mr. Kjellander, that I am heartily in favor of your suggestions about that, but unfortunately I can not make the Massachusetts Legislature believe as I do. You understand that there is an immense number of bottles used in Massachusetts. I have almost every dealer and every bottle manufacturer against me on the under-tolerance question, and they are pretty well organized. I only hope that I will get an opinion from Dr. Stratton to the effect that the Massachusetts law is unconstitutional, and then I think we will begin to “cut a little ice” over there. I do not think it is constitutional.

Now, as to the berry-box law. That law has been on the statute books for three years. We have had some convictions in the courts. But Massachusetts raises comparatively few of the berries we use. The majority of the native berries come late in the season; in the early part of the season we get them from Florida, South Carolina, etc., and the shippers are in the habit of sending almost any kind of a box they see fit. The dealers come to us and say: “We can not make the people in South Carolina adopt a standard box. If we should insist upon it they would say, ‘Well, we won’t send our berries to Massachusetts; if you do not want this kind of box we will send them to New York, Rhode Island, or some other place.’” There are hundreds of thousands of dollars tied up in this business in Massachusetts, as Boston is the distributing point for almost all States north of Massachusetts, and even some parts of Connecticut and

Rhode Island. Last year we got comparatively few short boxes. I have talked with the members at several meetings of the Fruit and Produce Exchange, and they have adopted resolutions in favor of a bill which is now before Congress which was introduced, I believe, by the Trade and Commission Men's League. It is a bill providing for uniform fruit packages. The day before I came away we had a basket sent from South Carolina, and one of those commission men in Boston, a man who receives anywhere from 15 to 20 carloads of berries a day in the season, came to me and said: "I have been doing my very best"—I threatened him with prosecution last year—"to get a standard quart basket, and to be able to guarantee a standard quart basket from the different places from which I receive berries. Here is a basket which has been submitted to the New York authorities and they said it was all right, but I am not entirely satisfied with it." I tested the basket and found it to be $2\frac{1}{2}$ cubic inches short. To be sure, that is only a small amount, but the point is this: If we said that was all right we would get ourselves into trouble. As I told him, we have no right, and no local sealer has a right, to set aside the requirements of the Massachusetts statute, the purpose of which is to give a certain number of cubic inches to a quart, and no basket containing less than that can be legally used in the Commonwealth. Undoubtedly, some cases may get by us, but if complaint is made to us there is only one thing to do, and that is to prosecute. They come to us with the same story that the Massachusetts requirements are too arbitrary; that there is no other State in the Union which asks them to do this thing. But I think this year we will have fewer short berry baskets than ever before. As a rough estimate, I do not believe we got over 15 per cent of short boxes last year.

Mr. KJELLANDER. Don't you think it would be feasible to sell berries and fruits and everything of that kind by weight?

Mr. PALMER. I do not think it would meet with favor in Massachusetts. They do not want to handle berries any more than they have to.

The CHAIRMAN. It is done almost entirely on the Pacific coast.

Mr. KJELLANDER. We have had berries shipped from the State of Washington to Chicago with the weight marked on the box, and we weighed the berries after that long shipment, and found that they weighed a pound or a trifle over.

Mr. PALMER. What kind of berries were they?

Mr. KJELLANDER. They were blackberries.

Mr. PALMER. Well, a blackberry will hold its weight better than a strawberry.

Mr. KJELLANDER. Of course.

Mr. PALMER. Now, they object very much in Dr. Reichmann's section to the provisions of this bill in regard to the shipping of raspberries. They ship sometimes 10 or 15 carloads a day to Boston, and

they object to the enforcement of our law. They say they should have a third of a quart box, because they can not ship in pint boxes; the berries crush of their own weight.

Mr. KJELLANDER. They could make them a little wider, couldn't they? It doesn't make any difference where they have the bottom in the box, as long as it holds a pint or a quart.

Mr. PALMER. You understand they have thousands of dollars tied up in standard crates, and the standard box would not fit those crates. The crates, as you probably know, are used over and over again. I hope Dr. Reichmann will be able to persuade his growers that they should use a standard quart basket.

The CHAIRMAN. I would like to ask Mr. Palmer if he has submitted that question to his own legal department.

Mr. PALMER. No, sir; I have not. I wanted it to come through this office first.

The CHAIRMAN. It is not barely possible that it might be settled in your own legal department?

Mr. PALMER. I would possibly not have as much confidence in the opinion of my own legal department.

The CHAIRMAN. What would happen if the United States Attorney General's Department, or the solicitor of our own department, or any of our legal officers, should say it was unconstitutional?

Mr. REICHMANN. It would have no standing whatever.

The CHAIRMAN. It would have no standing whatever. You simply want the moral effect?

Mr. PALMER. Yes; simply the moral effect.

The CHAIRMAN. We have a representative of the solicitor of our department here to-day, Mr. Wixson, and I will ask him to give us his views on the question.

Mr. WIXSON. You have stated the whole case, I think. The department takes the view that there is no Federal law involved, and for that reason is averse to expressing an opinion. There is no statute under which the Department of Commerce and Labor can take any steps in the matter, and the department is of opinion that it can not with propriety give formal expression of its views with respect to a question which does not arise under any law which it is required or authorized to administer.

Mr. PALMER. Let me ask a question here. Has the United States by any act established a standard quart?

Mr. WIXSON. I understand that such a standard has been adopted by the United States.

Mr. PALMER. Has any State the power to establish any other quart than that which the United States has established, or to sell as a quart anything which is different from what the United States establishes?

Mr. WIXSON. That may raise a pretty close question, but I am inclined to think, in view of the meager legislation by Congress, that a State might legally do something in that direction.

Mr. PALMER. That they have the right?

Mr. WIXSON. I am inclined to think so. This does not mean, however, that a State could substitute other measures for use in affairs pertaining to the Federal Government.

Mr. KJELLANDER. Where would we get our standards from then?

Mr. REICHMANN. That is just the point.

Mr. WIXSON. There certainly is no provision of Federal legislation which imposes a penalty for the use of any other measure than the standard adopted by the Federal Government. There is no way at present of enforcing the use by the States of the standard. Of course, a law which does not provide a means of enforcement is impotent, and that is the condition of the law, I think, so far as Federal legislation goes. It should be understood that what I may say in this connection can be of importance only in respect of the power of the department to undertake to act in the premises.

Mr. PALMER. Mr. Chairman, this opens a very important point to me, the fact that our standards are not standards; for that is what it practically amounts to.

Mr. WIXSON. A resolution of Congress in 1836 directed a distribution of the standards to the States with a view to uniformity. Beyond this there has been no general legislation upon the subject.

Mr. KJELLANDER. The Federal Government fixes the standard gallon, does it not?

Mr. WIXSON. That is my understanding. Congress has expressly provided that the word "gallon," wherever used in the internal-revenue laws relating to beer, ale, and other similar liquors, shall be held to mean a "wine gallon."

Mr. KJELLANDER. Congress did not fix any other standard than the standard gallon, but I do not think the law says for what purpose that was fixed.

Mr. WIXSON. Oh, no. There can hardly be any doubt but that the purpose of the resolution was that the standard gallon should be used in all cases; and the act defining the word "gallon" as used in the internal-revenue law, was doubtless merely declaratory of this general policy; but in the present state of the law it is idle of course for the Department of Commerce and Labor to undertake to regulate the subject or to question the legality of a State law relating thereto.

Mr. PALMER. Mr. Chairman, it seems to me that that is a very important thing, and I hope that before this conference adjourns it will take some action in the matter, possibly by adopting a resolution with a view to having the matter brought to the attention of Congress,

and, if nothing more, to have the subdivisions of the gallon, quart, etc., legalized by act of Congress, so that if this difficulty does arise, which it is bound to do in the enforcement of these statutes, all controversy of that kind can be avoided.

The CHAIRMAN. Mr. Palmer, it is not a question of legalizing; it is a question of what you are going to do when a person does not use the legal standard. Now, there is no question in my mind but what Congress adopted directly all these standards. They are legal standards. But what are you going to do under the law if somebody uses other than the legal standards? That is the thing that is not provided for. It is not penalized, and that is the great question. If by any means you can get Congress to adopt a law making it an offense to use false weights and measures anywhere in this country you will do a great thing; but, at the same time, it means taking this entire matter over into the hands of the Federal Government rather than leaving it to the States.

Mr. KJELLANDER. Is it not true that there never has been a standard adopted so far as dry measures are concerned, and that the standard we are using is merely a standard by usage or custom?

The CHAIRMAN. I hardly think so. That is a debatable question. However, it seems to me that when Congress directed the Secretary of the Treasury to furnish the States certain standards, it by its action made them legal.

Mr. KJELLANDER. Probably that is so.

The CHAIRMAN. Indirectly. That is the only interpretation you can put upon it.

Mr. HAZEN. Mr. Chairman, I would like to ask a question for information. Does not the Federal Government have jurisdiction over any interstate commerce?

Mr. WIXSON. Yes.

Mr. HAZEN. Now, then, if one State ships berries into another State under false measure would not the Federal Government have jurisdiction over that?

Mr. WIXSON. Whether the matter can be approached from that angle or not I am very certain that Congress has plenary powers under its constitutional authority to fix the standards of weights and measures, but it has not as yet exercised these powers in a manner to justify affirmative action by the department in such a case.

Mr. HAZEN. I was asking for information.

Mr. WIXSON. I am aware of no statute under which the department can take cognizance of such a transaction. In pursuance of the resolution of Congress most if not all of the States adopted the standards, the distribution of which was therein directed.

Mr. HAZEN. It seems to me that that is the pith of this whole matter—that while each State has the right to adopt a pound of 14

or 18 ounces, or a quart of different cubic measure, and use it in that State, irrespective of the Federal law, the minute it began to use those weights and measures, different from the standard weights and measures, in interstate commerce then the Federal Government would have jurisdiction. That, perhaps, is where I am mistaken, but I supposed that the only way this matter could be reached would be through interstate commerce, and that all that was to be done by this conference was based on that theory.

Mr. WIXSON. It may be added that the Attorney General years ago held that the word "gallon," as used in a statute relating to the duty to be assessed on importations of ale and porter, was to be understood as meaning a "wine gallon" of 231 cubic inches, and not the gallon of what was once designated as "beer measure," which contained 282 cubic inches. The question was brought up by importers in New York, and in discussing the case the Attorney General adverted to the fact that the only gallon measure distributed by the United States under the resolution of 1836 was that containing 231 cubic inches, and also pointed to the fact that the State of New York was among those expressly assenting to those standards. It is a fair inference, perhaps, that the acceptance by the State of this standard (the "wine gallon") was deemed a consideration of some consequence in reaching the conclusion announced. And the United States circuit court in Massachusetts, in a case in which a similar question was involved, expressed its approval of both the reasoning and conclusion of the Attorney General.

It may be proper to add in further elucidation of the subject, as I understand it, that the power to fix the standards of weights and measures, while granted to Congress by the Constitution of the United States, has never been expressly denied to the States. It is not the grant of power to Congress, but the actual exercise of the power by that body that makes its action exclusive. Hence, the States may exercise this power so long as Congress fails to do so. Should Congress conclude to occupy the field, however, any conflicting State legislation would thereby be rendered void.

Mr. PALMER. Yes. But, Mr. Chairman, would not a bill introduced in Congress providing a penalty for the use of weights and measures other than those which have been adopted take care that situation?

The CHAIRMAN. Yes; it would take care of it entirely. But it must penalize; that is, it is of no use to specify what constitutes an offense unless you also fix a penalty.

Mr. PALMER. It seems to me that a bill of that kind could not fail of passage if it were brought to the attention of Congress.

The CHAIRMAN. And, furthermore, our legal department has ruled that it is entirely proper, as I understand it, to introduce such a bill;

that we have precedent, and that it would not interfere with State rights. But this other matter is one which Congress has been very much opposed to taking up; that is, it tries to draw a line between the duties of the Federal Government and the so-called police duties of the States. Congress looks upon this enforcement of the use of the standards in localities as police duty, and holds that it should be left to the State. I do not quite agree with Mr. Hazen in his interpretation of the interstate commerce act; I do not believe any State would have the right to adopt a 14-ounce pound, but I do think that Congress would have the right, according to the Constitution, to say what weights and measures should be used in interstate commerce, and not feel that it was interfering with the police duty of the State or localities. In fact, so far as I can distinguish between National and State legislation, National legislation is usually hinged upon one of two things—interstate commerce, or the collection of our revenue—and Congress is very loath to take up any laws affecting local matters which are not concerned in one or both of these things.

Mr. GOODWIN. Mr. Chairman, does not the fact that a State uses the standards furnished by the Government establish the fact that those are the legal weights and measures of the State?

The CHAIRMAN. As far as I am aware, every State has made them legal. Is not that so, Mr. Fischer?

The SECRETARY. So far as I know.

Mr. GOODWIN. Then they must have the legal weight of both State and Government?

The CHAIRMAN. Yes.

Mr. REICHMANN. Mr. Chairman, this discussion was on the milk-bottle proposition, but I want to interrupt and talk about the berry-box proposition that Mr. Palmer spoke of, because he reflected upon the berry-box law of the State of New York, and spoke of how beautifully they were enforcing their law in Massachusetts.

Up to last year we had a berry-box law requiring berry boxes to be a quart, pint, or half pint, and if not, they must be marked on the outside thereof with the word "short." That, of course, is absolutely no protection to anyone, because nothing being stated beyond "the outside thereof," naturally they all marked them on the bottom. So last year I wanted to get that bill amended and have only standard quart, pint, or half-pint sizes, but it was amended in the committee, through pressure brought by the berry growers, to allow a variation of 7 per cent, which we have interpreted to mean below or above. Now, if we find a man with 16 boxes all short, we hold him up on them, and all those boxes that he did not use are shipped to the State of Massachusetts and sold there. Moreover, I do know, from any number of growers in South Carolina, that they are shipping

short boxes into the Boston market, and Mr. Palmer knows that they are coming in there. A gentleman down in the Hudson River district wrote to Mr. Palmer about them and also to me. He was one of those appearing in Albany in favor of the bill, and he subsequently wrote me saying that it did not make any difference if he did have any of these short boxes left from last year, as we would not allow them in our State, and he had made arrangements to market them in Worcester and Springfield. Understand, we are enforcing the berry-box law in the State of New York and getting after the manufacturers of the boxes, and not only the manufacturers in New York State, but we are warning every manufacturer in the United States and the commission merchants throughout the South and Southwest not to ship these boxes, and have induced a great many commission merchants to send full-sized boxes to their agents in North Carolina and Virginia and some as far as Louisiana.

Mr. KJELLANDER. Suppose the box is manufactured somewhere else?

Mr. REICHMANN. We can not touch them. We can stop them manufacturing in the State of New York, but if they are manufactured by any of those other concerns outside of the State, we can not touch them until they are actually sold in the State of New York. Let me give you an illustration: A prominent manufacturing company of Virginia sells berry boxes through their agents in Brooklyn. Now, some of those were short, but all the business went directly to the factory; consequently we could not hold the agents, but I had one of the inspectors watch where those boxes were delivered to the grower and then held up the grower when he sold the boxes. You see we got after the man's customer, and when you once get after a man's customer he will never have that customer again.

Mr. KJELLANDER. Suppose the berries are from other States, and the boxes also from other States?

Mr. REICHMANN. It does not make any difference. The State has absolute police power in regulating the sale of commodities within its territory. I can not do anything until they begin to sell them there, but I can hold the man who sells them.

Mr. KJELLANDER. That is what I wanted to get at.

Mr. REICHMANN. That is clearly the intent of the law.

Mr. HASKELL. Going back to the milk-bottle question: We are here as a kind of school of education, to gather ideas from different sections. We had a great deal of trouble here in the distribution of milk in bottles a few years ago. Ninety-five per cent of the milk bottles used in the District of Columbia were short from 1 to 2 ounces. We took a case into court and we had the court establish that the milk bottle was a measure, and then found that we had gotten rid of our trouble, because we find that if a man who is purchasing a quart of milk does not get a quart, the dealer is liable to

prosecution; and the consequence is that to-day, instead of having 95 per cent of our bottles short, it is exactly the reverse. I do not think that there is in the District of Columbia 5 per cent of the milk bottles that are not standard size; and this simply because we established the fact that a bottle is a measure; that if a person orders a quart of milk he is supposed to get a quart of milk, and that if dealers were selling milk in a short bottle they were using short measure.

It is exactly the same with the berry boxes. The only trouble that we have had is that people are so in the habit of asking for a basket of berries, expecting and supposing that it holds a quart, just as they are in the habit of asking for a loaf of bread, expecting it to weigh a pound. So that we have had some trouble with people going to places of business and simply asking for a basket of berries. They do that with the full confidence that the basket holds a quart. We have made a number of cases by requesting people to ask for a quart of berries, and when the dealer hands out measures that are not of full capacity, we prosecute him, and the consequence is that the conditions here as to berry boxes are satisfactory.

Mr. PALMER. Mr. Chairman, I would like to ask Mr. Haskell if he seals milk bottles.

Mr. HASKELL. We do not; because it would be practically an impossibility. It is the same way with flour. Our law requires that all flour shall be inspected and branded. We have cars of flour coming in here containing seven, eight, or nine thousand sacks. To brand that flour would be practically impossible. We could not do it, and consequently the matter has been practically dropped. We do not inspect the milk bottles.

Mr. PALMER. If milk bottles, as you say, have been construed by your local judge to be measures, and the law provides for the sealing of weights and measures, why are you not liable for breach of trust for not sealing those? That question would be raised in the State of Massachusetts in a minute.

Mr. REICHMANN. Your law requires you to seal all weights and measures?

Mr. HASKELL. It requires that all weights and measures used in the District of Columbia shall be sealed; that is true. But as we construe it, the law did not expect or require us to perform impossibilities.

Mr. KJELLANDER. But you have no right to construe the law except as it is. The courts construe the law.

Mr. HASKELL. I admit that.

Mr. KJELLANDER. What good is it to adopt a law providing for the sealing of weights and measures, if you do not obey it?

Mr. HASKELL. We have established through the courts that a milk bottle is a measure. Now, if we pick up bottles, as we do very often

on the street or in other places, and find that they are short, we prosecute the man for selling short measure. We do not prosecute him for using a measure that is not sealed and stamped, which our law requires, but we do prosecute him for short measure.

Mr. REICHMANN. Mr. Haskell, do you mean to tell me that you have had cases of that kind and no attorney has raised the question as to whether you were performing your duty?

Mr. HASKELL. We have had a number of cases.

Mr. REICHMANN. But no one has ever brought up that point?

Mr. HASKELL. No, sir.

Mr. REICHMANN. We ought to send some of our New York lawyers down here.

Mr. HASKELL. We do not file our information for using a measure that has not been sealed. We file our information for selling short measure, and our law against short measure is just as severe as it is against using a measure that is not sealed. Do you seal all the milk bottles in New York?

Mr. REICHMANN. No, sir; it would be a physical impossibility. One company alone, selling 10 per cent of the milk in New York City, uses over 7,000,000.

Mr. HASKELL. It all comes out the same way.

Mr. REICHMANN. Oh, but we have no statute or law of that kind.

Mr. THOMAS. Mr. Chairman, I have been much interested in this discussion. This subject has been one of the common questions coming to my attention in Ohio. I bring it up in connection with Massachusetts, because I have an interstate-commerce case and Massachusetts is involved. An Ohio citizen bought goods in Massachusetts for delivery and consumption in Maine. The citizen is myself. Last summer, on my way to my summer home at Squirrel Island, Me., I stopped as usual in Boston and ordered a supply of food of one sort and another from a reputable firm. Among other things, I ordered a 5-pound pail of lard. When I unpacked the goods, I was interested in finding this tag attached to the pail: "The price of this pail of lard (in very large letters) is 51 cents. It is not ('not' in extra large letters) sold by weight." That is selling by package and not by standard weight or measure, and it was interesting to me to learn what was going on in Massachusetts under the weights and measures law, when I found so prominent a concern doing this in order to escape liability from laws regarding weights and measures which are in force in Massachusetts.

Now, a question was brought to my official notice in Ohio involving the same principle, and it happened to be in connection with berry boxes. I was asked by a local authority whether dealers in berries had a right to sell berries by the box instead of by the quart. In connection with the advice of a local sealer in one of the cities there,

who held that berries could only be sold in quart or pint boxes, I carried the question to an attorney, who answered me to this effect: That the sale of berries in such boxes, or in any sort of box whatsoever, was lawful; that under the laws of Ohio it was impossible to prevent any such sale, because the question, if raised, would lead to a decision that such attempt to restrict the sale of berries to quart boxes, etc., interfered with the freedom and personal liberty of contract between individuals; that when a dealer offered berries for sale in a box and charged so much a box for them, and the citizen accepted them, it was a perfectly lawful transaction that could not be constitutionally interfered with in Ohio. "But," he said, after consideration, "it is perfectly possible to get around that difficulty by an act of the legislature, or an ordinance passed by the city council, which would read something like this: 'For the purpose of avoiding misrepresentation, misunderstanding, or fraud in the sale of goods' (we will say berries, to fit the particular case), 'it shall be unlawful to sell such commodities in receptacles or containers other than those whose capacities conform to the established standards of the State.'"

"Such action," he said, "is possible and perfectly lawful on the part of either the State legislature or any city council, for the reason that such action would merely be an exercise of the police powers which the Constitution lodges in the States and in municipalities by delegation from the State."

That, it seems to me, is the solution of this whole question of package sales of any sort whatever. That principle, you see, will underlie every one of them, and the question as to the introduction of a bill or of a section of a bill to this effect in our legislature, now in session, is under serious contemplation. The passage of an act like that would immediately remove all trouble with regard to the sale-by-package question in Ohio. I do not know how it would be in other States, but it fits our case.

In raising the question as to berries, etc., I took the ground which has been stated by Mr. Haskell with reference to the milk bottle, that the box in which the dealer sold his berries was being used as a measure; that the basket in which the dealer sold peaches, grapes, etc., was used as a measure. I said, "What does the packer or dealer do when he uses such a box?" He takes the empty receptacle, proceeds to fill it with the commodity, and when the basket is full he determines that he has put into it the amount of commodity that is to be sold for a certain price. He is himself, in fact, using that receptacle as a measure.

Mr. KJELLANDER. He is not using it as a measure, but as a guess, is he not?

Mr. THOMAS. No; he does really use that as a measure if he is honest with himself; he is not guessing. He is using that basket as

a measure of the quantity of the goods which he will give the purchaser for that price.

Mr. KJELLANDER. But all of these baskets, Mr. Thomas, are not alike; they vary.

Mr. THOMAS. They will vary some, but not very much.

On the question of selling berries, it was reported at a meeting of the sealers in Columbus that certain city sealers had ruled absolutely that berries should be sold by standard dry measure only, and not by the basket; and I have been informed that dealers, original packers and shippers of those goods, often make inquiry of the distributors in our Ohio cities, six months in advance, as to what sort of a basket will be allowed to be sold, and shipments have been made in accordance with the requirements. During the past year parties have shipped berries from the South to the commission merchants in Columbus in standard quart baskets. The commission merchants have sold to hucksters in those baskets; the hucksters have then taken their loads around into an alley, and proceeded to empty the berries from the standard quart baskets into the short baskets with which they had provided themselves, and then have gone out and sold them.

It seems to me that if this bill which was presented before the executive committee yesterday and considered by it, and which has yet to be considered by the conference, can be enacted into law, it will get rid of all this trouble. The minute you make it impossible for manufacturers to make unlawful measures, you cover the whole situation and do away with the trouble.

Mr. PALMER. Mr. Chairman, the tag that Prof. Thomas found on the pail was the result of a little inspection we had in Massachusetts. We found that the general practice was (and I presume it was so all over the country) to use pails supposed to contain 3, 5, and 10 pounds of lard, when as a matter of fact they did not weight 3, 5, and 10 pounds gross. The concern referred to is one of the most reputable in the State. It sent a representative to me, and we talked it over. He said, "We are in this helpless position. We have asked packer after packer to give us net weight lard in 3, 5, and 10 pound packages, and they will not do it."

Mr. REICHMANN. Excuse me; dealers can get it if they want it.

Mr. PALMER. It was brought out at the time that a certain packer was accredited with giving full weight, but, as a matter of fact, we found that he did not do so.

The representative of the Boston concern conferred again with two of the largest packing houses in Chicago, and the treasurer of one concern and the president of the other were sent to Massachusetts, and they had a long conference. They said that Massachusetts was the only State, with the exception, I think, of Nebraska, or North Dakota, or one of those States, which was exacting any requirement

of this kind, and they absolutely refused to provide a special package for the State of Massachusetts.

They asked my opinion as to whether they could sell these pails of lard as "No. 3," "No. 5," and "No. 10." I had my mind made up that they could, but I did not tell them so. They got an opinion from their counsel that they could sell them as No. 3, No. 5, and No. 10. They are not doing it in Massachusetts, but they are in other States. There is no concern that will give a guaranty, that is, at a reasonable price, so that dealers could enter into competition with other dealers and sell them as 3, 5, and 10 pound packages of lard.

Mr. KJELLANDER. Did these gentlemen tell you that there was no other State that asked them to do it?

Mr. PALMER. None that required them to do it.

Mr. KJELLANDER. That goes to prove that they are not telling the truth, because all those packers have been to see me, and I have asked them to do it. I tried to get a law passed, but I could not because they fought it.

Mr. PALMER. You misunderstood me. I said "required them to do it."

I found some figures like this: "1/12, 3, 11." That was the wholesale price of a pound of lard. I asked them, "What is the '1/12' there for?" They said, "One-twelfth of a dozen." I said, "What is the '3'?" They said, "That is No. 3 lard." I said, "What is the '11'?" They said, "Oh, that ought not to be there; that is a mistake."

The fact of the matter is that those cans contain 2 pounds and 7 ounces of lard and 9 ounces of tin. Just as much is charged for the tin as for the lard; and, of course, the people can not eat the tin.

Mr. HASKELL. What is the inference to the public when a can is marked "3," "5," or "10"? Is it not 3, 5, and 10 pounds?

The CHAIRMAN. Certainly.

Mr. HASKELL. If you go into any court and establish that a person went into a store and bought what he supposed to be 3 pounds, and was marked "3," whether the word "pounds" was on it or not, the court will sustain you.

Mr. KJELLANDER. I beg your pardon. We tried it in Chicago and we lost.

The CHAIRMAN. The next State on the list is Michigan, represented by Mr. Albert E. Sleeper, State treasurer.

Mr. SLEEPER. Mr. Chairman, I will not say very much, but I will say that our law is an old one, having been passed some time ago, and there is no provision for inspection, or, rather, no provision for the payment of inspection, and therefore the inspection has been rather poor. I understand that in the cities local ordinances govern inspection and that it is quite well taken care of in that respect.

The law of the State makes the State treasurer the State sealer, and authority is handed down by him to the county clerks, and from the county clerks to the township clerks. The county clerks in a large number of counties have no proper scales, and a great many of the townships are in the same position. So I am sorry to say we are a little lax in that respect.

We had a bill introduced in the last session of the legislature, which we did not get through; but we hope to do it at the next session.

We have quite a fruit-growing country. We send whole boatloads over to Chicago, and I suspect, perhaps, we have sometimes kept the full quarts at home and sent the halves over there. But we have been pretty busy in Michigan during the last two or three years making automobiles, and we have had very little time to take care of the weights and measures law. But if you will give us a little time, I think perhaps in the future we will be able to evolve something that will be satisfactory.

The CHAIRMAN. The next is Minnesota. We have four representatives from that State. I do not know that there is any particular order in which they shall be called upon, so I will first call upon Mr. C. R. Dinehart, State treasurer.

Mr. QUIST. Mr. Chairman, Mr. Dinehart had an appointment at the Treasury Department between 3 and 4 o'clock this afternoon, and begged to be excused at the conference. He requested me to say, however, that he was very much interested in this work, and that he would do all he could toward placing such laws on the statute book as were recommended by this conference.

The CHAIRMAN. Have the other representatives any report to make?

Mr. QUIST. Mr. Chairman, I have prepared a short paper on the subject in which I am most interested, namely, the handling of grain in Minnesota.

The CHAIRMAN. I am sure we will be glad to hear it. Mr. Quist is State weighmaster for Minnesota.

Mr. QUIST. I will read it to you; it is not very long.

In Minnesota, one of that wonderful group of States that might aptly be called the harvest field of the world, we have for almost 25 years been developing and perfecting a system of weighing accurately the products of our farms, so that when the countryman sends his store of grain to the terminal market he can rest secure in the knowledge that his interest will be taken care of by a bonded State weigher as experienced in weighing as the representative of the terminal miller may be. As long as there exists in human nature the desire to obtain something for nothing there will always be conflict between buyer and seller; and to guard the interests of the producer of grain, who

obviously can not be on hand to see his product weighed or measured, the State of Minnesota maintains an organized weighing and inspection department under the control of the State railroad and warehouse commission. This system has been in operation since June 1, 1885. Previous to its establishment the control of inspection and weighing was vested in the commercial bodies in the State, the members of which bodies chose each year the official inspectors and weighers by ballot. The fact that the membership of these commercial organizations was made up almost exclusively of the buyers of grain led to the belief that the inspection and weighing were arbitrary and unjust to the producer and country shipper and altogether in the interests of the miller and terminal warehouseman, thus causing a great deal of dissatisfaction throughout the State.

In Minneapolis alone there are 74 grain elevators and flour mills where the State supervises the weighing, each weigher being a man trained for the work and giving a surety bond for the amount of \$5,000. The scales used are modern and equipped with a registry device for stamping the weight upon a card, which stamped ticket or card serves as a check against error at the time of taking the weight, and is carefully preserved for any probable reference afterwards. Scale experts are employed whose sole duties are to adjust the scales on which the official weights are given. These scale experts are also under a bond of \$5,000, and their work is under continual scrutiny by the State weighmaster, who is enabled to learn even before a test is made, should a scale get out of order, for, with several hundred carloads each day, any variation would be apparent at once. In this connection it might be well to state that the department is not satisfied with the results of weighing at the terminals if the variation locally exceeds one-twentieth of 1 per cent; and this amount is not all the result of scale variation, as it also takes care of the natural shrinkage in the handling of grain. Hence it must follow that the many scales involved must be accurately adjusted and maintained in perfect order to secure these close results.

The aggregate tonnage handled over the scales in Minneapolis is enormous, when it is considered that in one of the recent years there were weighed 259,996 cars of grain, equaling 252,043,924 bushels. Allowing 40 feet as the length of each car containing this grain, it would make up into a solid train extending from New York City to a point 232 miles west of Bismarck, N. Dak., and each car would contain more grain than is produced by the average Minnesota farm.

While I do not contend that Minnesota is the only Commonwealth that has accomplished much by means of State supervision, I do strongly urge before this conference the absolute need of State intervention between rural producer and urban receiver, such supervision to be based upon bonded responsibility, undoubted integrity,

and strict examination for ability, applying to each member of such organization of supervision. And even with what has been accomplished by State supervision, running through the experience of almost a quarter of a century, I feel that we have only begun the work. Outside of the railroad equipment and railroad track scales throughout the State, there is no system of inspection of weighing devices. Hence a great variation may exist without the fact being discovered until too late for justice to produce its evidence, or until rascality has had time to cover its tracks. It is true that three large cities in Minnesota, by means of city ordinances, aim to maintain a system of supervision of weights and measures which undoubtedly accomplishes much good, and is a step in the right direction; but usually, because of the limited authority behind them, the efforts of city sealers of weights and measures are proportionately limited. It has always been a recognized fact that efficient service is not likely to be secured from men who, holding one important office, are charged with doing work wholly foreign to that office. Hence under a system, as in Minnesota, where the State treasurer and the county treasurers are not only the custodians of the prevailing standards, but are also expected to handle the technical part of the question as well, it must be evident to all that these officers can not be fitted, as a whole or in small part, to perform the exceedingly accurate work required from a skilled sealer. Under such a system there can be no doubt that great laxity exists in an effort to maintain proper standards, and that of the many devices used for determining the quantity the majority would not stand the proper test. Whether this is caused by lack of understanding, carelessness, or dishonesty, we should not hesitate long to apply a proper remedy.

I have been much interested in the suggestion sent me by the National Bureau of Standards, and realize that much thought must have been given to the subject treated therein; and I fully believe that if the suggestions as to supervision of weights and measures are carried out it requires then but conscientious effort and competency on the part of any bureau or commission that may be established for the purpose to bring about justice between man and man in the all-important matters of weights and measures. I thank you, gentlemen.

The ACTING CHAIRMAN (Mr. Palmer). Mr. Quist, when this State system of weights and measures was established, do you know whether any other subject was considered?

Mr. QUIST. No, sir. This department has supervision only of grain, and it is under the direction of the railroad and warehouse commission.

The ACTING CHAIRMAN. I wish to ask a question. We are interested in flour in Massachusetts, and considerable controversy has

arisen between the State department of weights and measures and some of the largest mills in your section. Is there any supervision, that you know of, over the scales used for weighing the bags and barrels when being filled with flour?

Mr. QUIST. No, sir; we only weigh the grain and have nothing to do with the flour.

Mr. NEALE. Mr. Chairman, allow me so say that there is a supervision, brought about by the efforts of the city sealer. He has the privilege of checking any shipments he may wish to, and is also charged with the duty of checking the scales.

Mr. QUIST. I was not aware that that came under his jurisdiction.

The ACTING CHAIRMAN. The next gentleman is Mr. Charles Neale, scale inspector for the State railroad and warehouse commission.

Mr. NEALE. Mr. Chairman and gentlemen, Minnesota is represented pretty well, in numbers at least, and I have not the honor even of being an officer of the State nor sealer of weights and measures of a large city, but, having earned my bread and butter for 19 years in that which appertains to weight and measure equipment, I naturally would be vitally interested in all that pertains to it. I believe that subject is well taken care of by the men who have it in hand here, but I do want to introduce before this convention a matter on which I have written a few remarks.

I desire to place before this convention a matter that must ultimately be recognized and dealt with by Federal or State authority wherever the matter of scales and weighing machinery is given serious thought or comes under any supervision tending to secure correct results. I refer to the fact that all scales manufactured today of the adjustable lever type can be manipulated to weigh more or less than standard or true weight by anyone so inclined, without any possibility of establishing proof that such tampering with the leverage of the scale had been done with the intent to commit fraud or otherwise.

What I want to bring out is that, as the matter stands at the present time, unless some means is adopted to make the term "sealing a scale" mean something, by the use of some device to give evidence if the scale leverage has been tampered with, our efforts to adjust scales to a given standard and maintain them so fail entirely to accomplish the intention.

The fact that scale manufacturers for the past 65 years have been turning out scales from their factories without any means being provided whereby they could be made to indicate if the scales were changed from the original seal to weigh incorrectly by the changing of the leverage by anyone who might be so inclined is beyond my understanding.

In the State service in Minnesota we were forced to find some means to assure us that the scale leverage of the scales in the State department was not or could not be changed without detection by other than the regular bonded department experts, and this necessary action on our part resulted in the adoption of the simple yet effective device which I am given the privilege to exhibit here.

It might be worth stating that the only opposition we have met at any time in the matter of applying this sealing device to scales has invariably come from those sources most needing surveillance.

No man who has to do with scales and weighing can deny the urgent need of having the most vital part of a scale, that part which determines the leverage or weighing results, guarded by some means so that when the scale is left correct there will be assurance that it will not be manipulated in the interests of anyone without detection.

The device used by the State of Minnesota is a shield made to fit closely over the set screws or nutted bolts, as the case may be, by means of which the so-called "nose irons" are held in proper position.

It must be plain to all that if the set-screws can not be loosened, so that the leverage can be changed, without breaking the sealing wire that holds the shield over the vital holding set-screws, evidence is at once given that such manipulation had been done, and of course the responsibility would then be placed on the owner or operator of the scale.

The pamphlet, which I will take the liberty to hand you, regarding this particular sealing device, shows in a measure what has been accomplished, and that is only a beginning; for, as closer results in weighing are demanded from day to day, so will the requirements that relate to the maintaining of accurate weighing equipment become greater, and I predict that the time is very near at hand when we will all regard it as ridiculous to have left this one door open to fraud, so easily brought about by any one, without fear of consequences, where a scale is called "sealed" and in reality is not sealed at all.

(Mr. Neale here exhibited samples of two types of the device referred to, and also a portable indicator for use in testing scales.)

The CHAIRMAN. Mr. E. O. Sather, city sealer of Minneapolis, is the next to speak.

Mr. SATHER. Mr. Chairman and gentlemen, I presume, with the exception of Mr. Kjellander, I am the only city sealer present. I did not prepare any specific paper for this occasion, as I was not sure that I would be permitted to take an active part in the conference, but I am very glad to be here, for it is something that I have been looking forward to ever since I became connected with the office of sealer of weights and measures.

Notwithstanding that our office has been in existence in Minneapolis since 1879, I am sorry to say it is yet in its infancy. We have just begun to perform work that is showing a little effect. Having a city of 300,000 or more people and only one man to perform all the duties involved in that office, anyone who is acquainted with the work can readily see that in covering such a large territory and with the different departments, it is a hard matter to do justice to any one particular department.

Great stress has been laid in Minneapolis upon the fact that the scales should be taken care of, which on my first inspection last year I found was very necessary. I am sorry to say that a large percentage of those scales were in bad condition. We have in Minneapolis quite a number of even-balance scales, and I found to my astonishment that the weights of those even-balance scales had never been tested; at any rate there was no record in the office to show that they had been. Mr. Kjellander said that after the abolishment of short weights the scales would eventually take care of themselves. That may be, but I am a little inclined to take issue with Mr. Kjellander where the inspection is just beginning. I believe that the scales must be adjusted first, and as nearly correct as possible, and that the people operating those scales must be given to understand that they must use them correctly. Then, after the scales have been corrected and put in order, and when prosecutions begin to follow, they will realize that the city sealer means business. If you do not get the scales correct in the first place, it is an impossibility to get convictions for short weight, for they will contend that the scales have not been sealed, that they have not been put in perfect order, and consequently that they did not know they were giving short weight.

As I say, I have had a very limited time to perfect the scales of Minneapolis, and I am sorry to say that they are not perfect. It requires considerable time to keep watch of the scales, and I believe that every sealer who has had anything to do with apparatus will realize this and how easily they are manipulated. I have had cases of conviction where the first excuse was that the scale had not been tested, but when the party was asked the question whether it had been tested or not, he did not want to answer, for the reason that he knew he would incriminate himself, because he had never called for an inspection. This particular case was that of a party selling butter, having his establishment in his private house. As the law reads, I have no jurisdiction over a private scale; it must be a commercial scale. But at the same time, even though it was a private scale, he was using it for commercial purposes, and it was his duty to bring the scale to me and have it tested. Consequently, when the city attorney asked him if the scale had been tested, the defendant's attorney was

quick to object to that question, for he did not want his client to incriminate himself, and the question went over. He paid a large fine for selling short-weight butter and also lost his scale, as it was taken away from him when he brought it to my office the next day. So this shows that it is necessary to test the scales.

I have mentioned that we had a considerable number of even-balance scales. We have also quite a number of computing scales of different makes. Computing scales, as you know, are set on a frame and are put in balance with an adjusting screw. Now, it is an easy matter for any merchant to manipulate that screw and throw the scale off half an ounce or an ounce, and there is no way that we can possibly stop the manipulating of such scales unless such a device as that indicated by Mr. Neale can be adopted. When I first started to test scales I was asked this question more than once: "When you have sealed a scale and put a tag on it, what have you done to it to prevent people from tampering with it?" And I would have to answer, "I have done absolutely nothing to prevent them from altering the apparatus. I was simply checking them up, and that was all. This did not protect the consumer to the fullest extent. On the other hand, if such a device as this which I have spoken of can be applied to any scale so that the scale can not be tampered with, the scale is protected, and the consumer is protected. I have at the present time an ordinance before the city council of Minneapolis asking for such a sealing device; but it will have to be such a device as the city council will approve before the sealer can use it.

Mr. GOODWIN. Let me ask a question. Do you have any law regarding tampering with a scale after the sealer leaves it?

Mr. SATHER. We have to this extent: That if we can prove that a man has willfully tampered with the scale he can be prosecuted.

Mr. GOODWIN. Do you have a penalty?

Mr. SATHER. We have a penalty for that. But if I go into a store and find a scale out of balance, the merchant may say, "Well, the scale is just as you left it when you were here; I never touched it." What proof have I, under the present conditions, that he did tamper with it? That is one reason why it is necessary to have some device to prevent the owner from manipulating his scale. This proposed ordinance carries with it a penalty and makes it a misdemeanor for anyone to remove the sealing device of the cap, and it throws the responsibility of removing it upon the owner of the scale. The owner may not know anything about the scale having been tampered with, but at the same time he is responsible for it.

Mr. KEMMERER. Suppose this device is attached to the different types of scales, for instance, a computing scale, what is to hinder any merchant from giving 15 ounces to the pound, whether that cap is

put on the scale or not? Does it make him any more honest? The customer can not see what the scale registers unless he goes behind the counter.

Mr. SATHER. That is true; there is nothing to hinder him from giving short weight, but at the same time there is a check on him so that he can not tamper with the scale. Any man can give all the way from one to several ounces short weight if he wants to; we can not stop him unless we catch him at it.

Mr. KEMMERER. I do not believe that there is one out of a dozen times that a customer is defrauded, where it is done by tampering with the scale. I believe, as Mr. Kjellander said just now, that very much more of that is done by short weight than by tampering with the scale.

Mr. PALMER. He could move this computing scale to another position on the counter and accomplish the same results, could he not?

Mr. SATHER. All computing scales have to be leveled before being operated, and the owner would not be allowed to move the scale from one counter to another without the permission of the sealer, because by moving the scale it would be thrown out of balance.

Mr. PALMER. That is the point exactly; he would intentionally throw it out of balance. What would you do in that case?

Mr. SATHER. If we had moved the scale without the sealer's knowledge and consent, he would be prosecuted.

Mr. PALMER. Would it not be a hardship to say that he must use his scale on a certain place on the counter, and not move it to any other part?

Mr. SATHER. I do not think that would be a hardship. I do not know that I have found a single scale that has been moved, except during repairs or for similar cause.

The SECRETARY. May I interrupt a moment? Mr. Kjellander's attitude has been mentioned once or twice, and it seems to me it is a little misunderstood. I thoroughly agree with Mr. Kjellander. I do not think he means for a moment that the scales should not be tested, but the point he makes is that even if they are tested, you are not sure of getting honest weight, and consequently the thing to look out for is to see whether the purchaser is getting what he pays for. If you do that the other will take care of itself under proper laws. It seems to me a law might be framed so that the sealer would not need to examine anything; it would be up to the merchant. Of course I do not say that such a law would be advisable. But the main thing to do is to examine purchases and see that they are what they are represented to be.

Mr. KJELLANDER. I do not wish to be understood as saying that scales should not be sealed. Of course scales must be tested and sealed. The reason for testing a scale is to see whether it is correct

throughout. For instance, we find that spring scale may be correct up to 1 pound, or up to 2 pounds, but after it has gone as far as 1 or 2 pounds the scale may then begin to be incorrect. That is the purpose, as far as I understand it, of testing scales. It is a protection to the owner and to the public alike.

Now, as to the possibility of keeping grocery scales in order, I will say that it is impossible, especially in the city of Chicago or any large city, to see that scales remain correct after they have been tested. No human being can do it; it is impossible. But you should have an ordinance to the effect that if the scale is not correct either the owner should be warned that his scale is out of balance, or you should prosecute him for not keeping his scale in balance. We have in the city of Chicago an ordinance to this effect, which remedies all those things:

If any person shall use, maintain, or operate in the city any weight, measure, or scale, etc., which shall be out of order or incorrect, or which shall not balance, he shall be fined for every such offense not less than \$25 and not more than \$100.

It is the sealer's duty to see that those men are warned that their scales must be kept in balance. I have given this advice to all the grocerymen when they have come to see me: "Our testing does not mean anything except that the scale was correct at the moment when we tested it, and if your scale gets out of balance you are liable. It does not make any difference, if a screw gets loose, whether you unscrewed it yourself, or whether some one else did; you are liable yourself." It may seem unjust, but that is the only way you can do business. The grocerymen can put a scale in balance at any time. If a screw gets loose they can tighten it without trouble, and the advice I have given them is, "Every morning when you go into your store, go around and look at your scales and see whether they are in balance, or give your clerks instructions to do so, because if you do not do this you are running a big risk of being prosecuted and fined."

The device that has been spoken of here may be all right. I have not studied it; I do not know anything about it. Probably it would be a good thing. But anyway, if you do not have such a device, of course you have to do the other thing. We have to say to the merchants, "It is up to you to keep your scale in balance. If you do not, you are responsible and that is all there is to it."

Mr. REICHMANN. Mr. Chairman, I think Mr. Neale is misunderstood. His device is a very good one, but I think he tries to carry it too far. It is all right as a device to protect the adjustment of a nose iron on a large scale. Now, Mr. Neale is a State employee, and in his inspection of railway track scales, it is very necessary and desirable that he put a seal on scales that can be broken only by him officially, he being a bonded officer under the State; but when you

carry that too far, and apply it to every little adjustment and every little screw on every grocery scale, that is a different proposition. In other words, the easiest way for him to adjust the leverage on large scales is to adjust the nose iron. If the nose iron is exposed so that it could be easily done, there is that temptation, and his device simply removes that temptation. Of course that does not mean that a man can not weight incorrectly on the scale; it simply removes the temptation to use his scale when out of balance. I think you are trying to carry the matter too far by considering the device applicable to all scales.

Mr. SATHER. That may be so, but I do not see it that way. I have had considerable trouble with keeping scales in balance. As Mr. Kjellander said, you have to look after the scales and see that the merchants keep them in order; but at the same time, when you drive up and the merchant sees you get out of your buggy and come into the store, he gets busy at that moment to adjust his scale to balance, if it is out of balance. It is evident that something should be put on the scale to stop him from doing that, and to stop the possibility of his tampering with his scale. There is one store in Minneapolis that I have visited about once a month (I would visit it oftener if I had time), and I have never gone into that store without finding every one of those computing scales out of balance. Every time I have been there they have been out of balance all the way from one-half to one ounce.

Mr. YODER. Are they all the same type of scale?

Mr. SATHER. Yes.

Mr. KJELLANDER. I would say to them, "You can not use that scale; get a scale that is right."

Mr. SATHER. The scale is perfect, if they would only leave it alone. I asked the city attorney if I could prosecute them for it, and he told me no.

Mr. REICHMANN. You had better elect a new city attorney.

Mr. HASKELL. Mr. Chairman, the man who owns the scale or is using it, whether it be a balance or computing scale, can see as well as the inspector whether it is an ounce or two incorrect. If it is incorrect by an ounce or two, it is evident that the man purposes to defraud the public. That is the way we look upon it, and we immediately take him to the police court. If it is caused by carelessness, and he is prosecuted and pays \$25 or \$50, he is very much more apt to look his scales over and see that they are all tight. He can see when he looks at the dial whether it is just at zero or not. Two or three prosecutions of that kind spread over the town pretty rapidly. If on our first visit to a store we have any reason to think that the man is not strictly honest, we call at his place two or three days

afterwards, and if we then find his scale out of order, it is evidence enough to us that his intention is to defraud.

Mr. KJELLANDER. I want to say that I have prosecuted between 75 and 100 merchants in the city of Chicago because their scales were 1 or 2 ounces out of the way. In one instance a scale was incorrect by 4 ounces; and the man was fined by a jury \$100 and costs.

Mr. HASKELL. In regard to the device spoken of, I do not understand that this convention is to take any action on this device, but that it is merely for the purpose of educating us into different ideas, in which we are all willing and anxious to improve ourselves. The device may be a good thing; no doubt it would be on computing scales, and also on certain other kinds of scales that can be manipulated with a thumbscrew. If it were covered up and so fastened that it could not be removed except by the sealer, it would undoubtedly be of some benefit. But when a scale is found 2 ounces fast or thereabouts, it is evidence to us that the man's intention is to defraud, and we have acted on that; because he can tell whether the arrow is pointing at zero or whether it is 2 ounces fast.

Mr. RICE. Mr. Chairman, I would like to ask the gentleman one question. Suppose he inspects a computing scale and seals it as correct, and the next week finds it incorrect—short—and again adjusts and seals it. He repeats the operation a week later, and so on. How many times will he have to find that scale weighing short, and adjust it, before he can refuse to seal it and put his "condemning" tag on it, and thereby throw the scale out of use and make it valueless, instead of resorting to prosecution?

Mr. SATHER. I have no law, either directly or indirectly, so far as I know, whereby I can prosecute a man who is using a faulty weighing machine. As I say, even though this law has been in effect since 1879, we are yet in our infancy, and we want to learn all we can along these lines.

The CHAIRMAN. Gentlemen, I think it would be entirely in order for you to pass resolutions regarding any particular type or design if in your experience you find that a particular make of scale has some defect, and in that way give the dealer a warning. If you say, "We do not approve of this type," I do not believe a single dealer in scales can afford to neglect that warning, especially when you get well organized.

Mr. REICHMANN. How is the dealer going to know that we have adopted such a resolution?

The CHAIRMAN. Through the sealers.

Mr. KJELLANDER. That part is all right if the bureau takes hold of it and says, "You can use only certain kinds of devices;" but it would be dangerous for the sealers to say, "Do not use that scale,

because I do not think that is a popular scale." That would be immediately showing partiality, and we have to be very careful about such matters, at least in Chicago. There is a fight, for instance, now between two large scale makers in this country, and they have been trying to drag me into it. A salesman for one of the concerns came to my office and told me that a certain scale was wrong, and that it was always wrong. I said, "How do you know?" He said, "Because I know." I said, "That does not prove anything to me. Now, let me tell you, sir, I am not like the colored gentleman in Omaha, and you have to show me before I start anything." So he went out very much offended. He got so much offended that he got insulted. I told him, "There is the door; get out of here."

But at the same time, as I said, for us to say that a certain scale is not the kind of scale to use, even though it should not be at all times absolutely correct, is, in my opinion, a dangerous thing to do. If our Government has the power, or could assume the power to prescribe the kinds of devices which may be used, as the English Government does, it would be a very excellent thing to exercise that power. In England, as I learned from Mr. McMahon, deputy warden of the standards of England, a scale is tested by putting weights on it up to its full capacity and letting them remain there, I believe he said, 24 hours, and if the scale does not weigh correctly after that, pound for pound, ounce for ounce, its use is not permitted. But for me to go ahead in the city of Chicago and say, "Here, you can not use this kind of scale," I am not going to do it.

The CHAIRMAN. I think you misunderstood me. I certainly did not mean to propose anything of that kind; but if you should say that this association of sealers had disapproved of that form that would be very strong backing, and if this association will submit a matter of that kind to the bureau I have an idea that the bureau will pass on it. There is a great difference between your going to those people as an individual and your representing to those people the action of this body as a whole. In fact, I would like to see this body take action in regard to some of these things that ought to be abandoned.

Mr. REICHMANN. Following your suggestion, Mr. Chairman, I give notice that I will introduce a resolution to-morrow, if you will entertain it, condemning certain types of scales, and calling upon the Bureau of Standards to furnish every sealer and every manufacturer of scales, weights, and measures in the United States with a copy of that resolution.

The CHAIRMAN. I should have to know just what the case is.

Mr. HASKELL. Mr. Chairman, I think such a resolution would have to be pretty carefully looked into.

The CHAIRMAN. I can assure you that it would be carefully looked into.

Mr. REICHMANN. Of course, any sealer has a right to submit to this bureau any type of balance and ask for an opinion, for his own information; but the suggestion I made was that this conference might take action in regard to certain points that were undesirable in regard to scales, and that those points might be made public without injury to a single member of the conference.

Mr. HASKELL. I think some such resolution will come up before we adjourn. Suppose a sealer should assume the responsibility of saying to an individual that he shall not use a certain type of scale. He would immediately be taken into court and sued for damages. He would not be able to attend to anything else except to protect himself against suits for damages.

Mr. PALMER. Mr. Chairman, do I understand that the bureau is in a position now to officially pass upon any type of scale, or measuring device, which is submitted to it by a State officer?

The CHAIRMAN. We are doing it every day.

Mr. PALMER. That is news to me. I am very glad to hear it. I want to submit some things to the bureau.

The SECRETARY. We are, however, without authority at the present time to enforce any conclusion we may come to.

Mr. REICHMANN. But your report can be made public, can it not?

The SECRETARY. I do not think we would give it to you for that purpose.

Mr. REICHMANN. But that is what we want it for.

The SECRETARY. What we are doing every day is examining types of machines submitted to us by manufacturers who desire our opinion on them.

Mr. REICHMANN. On the principle involved in the scale?

The SECRETARY. Yes; but this opinion is confidential and not intended for publication. If we find that the scale is defective in design we report it to the manufacturer, but we have no authority to prohibit its use.

Mr. THOMAS. This is the first opportunity we have had to hear from Minnesota. I would like to hear the rest that is to be said by Mr. Sather.

Mr. SATHER. Mr. Chairman, it seems that by introducing the sealing device I stirred up a hornet's nest; but that is all right. We are here to learn all we can. However, I shall not say any more about scales at the present time. It may come up a little later.

I will say that I am in the same position with the rest of you here. I am satisfied in one way—that is, that the rest of you are in the same trouble that I am. I am not at all content, but I find that we all have the same difficulty in remedying matters; for instance, short weight. Now, we have no direct laws governing short weight. We have not even a direct State law that I can fall back upon. Of

course, the State has adopted the bushel measure, but that is about all it has done. Dealers can come into Minneapolis and sell potatoes by the bushel or bushel basket. They call a basket a bushel. Dealers use different-sized bags for measuring a peck. Butter, for instance, is sold by "jars" and "prints." They got around the law by claiming they were not selling by the pound, but by the jar or print. I have had three convictions on short-weight butter. The first one was in Minneapolis, and it has had its good effect. And since I have not had any straight or direct law to work by, I have been working in with the grocerymen. In making my rounds last fall I called on a great many grocerymen and told them, in regard to short-weight butter, that if they did not help me to force the packer to give full weight, I would have to get after them. I told them that I did not feel that I was justified in prosecuting the grocerymen, for I considered that they received the butter from the packer with one hand and handed it out to the customer with the other, and that they had nothing to do with the short weight; but that if they would not assist me in getting after the packer, I would have to get after the individual seller. By this method I was finally able to get before the short-weight committee of the Retail Grocers' Association, an organization of 300 members, and while at the conference I introduced a card which Mr. Fischer now has.

By request the secretary read the card referred to, which is as follows:

The standing committee on "short weights and measures" of the Minneapolis Retail Grocers' Association for the year 1910 respectfully solicit the aid and cooperation of all grocers and butter dealers in the city to help weed out the short weights on brick, print, and jar butter, or anything that shows intent to defraud or deceive the consumer. Please report any irregularity or unlawful weight or measure to any of the undersigned committee. City Sealer of Weights and Measures E. O. Sather is with us and will take up any such complaint and prosecute the same to the full extent of the law.

JANUARY 20, 1910.

The SECRETARY. I also have a resolution that Mr. Sather handed me, which I will read:

Resolutions adopted at the meeting of the Minneapolis Retail Grocers' Association held on the 14th of February, 1910.

Whereas the practice of selling butter and other table commodities all short weight has been openly practiced by dealers and that the retail grocer, in nearly all cases, has to bear the blame for the packer's and middle man's fraud.

Therefore, be it resolved by the Minneapolis Retail Grocers' Association at its regular meeting, which was held February 14, 1910, That it be the prayer of this association that the National Conference on Weights and Measures be urged to use its best influence in securing such national and State laws that will bring about that all table commodities (such as apples, potatoes, onions, turnips, parsnips, spinach, cranberries, butter, etc.), be bought and sold exclusively by

weight instead of by measure; also that all commodities sold in packages have printed on the wrapper thereof, in plain letters, the net weight of same, and

Be it further resolved, That Mr. E. O. Sather, city sealer of Minneapolis, be, and is hereby, chosen to represent this organization in Washington, which said organization will indorse any action taken by Mr. Sather in connection with any work relative to said measure.

Mr. SATHER. That speaks for itself, namely, that the Grocers' Association is willing to cooperate with the sealer of weights and measures in stamping out the short-weight butter and other commodities that appear on the market.

It may seem strange that when the sealer is after these people for short weight, he should have to solicit their aid in carrying it out; but we do not have adequate laws, and I may say that our present council is in such shape that it is a hard matter to get anything before them at the present time. They have had a gas proposition before them which has occupied most of their time. That is one reason why there have not been any special laws adopted. But I believe that by getting the grocerymen to understand that prosecutions will follow if they do not get in line, it will have a good moral effect. The card the Retail Grocers' Association had printed was published in the city papers of Minneapolis, and a very good editorial went with it, so that it has had its effect.

When I took office a year ago butter was frequently found as low as $14\frac{1}{2}$ ounces in a print; and now it seldom runs below three-eighths of an ounce short. Occasionally one runs half an ounce short. I went after them, wrote letters with threats, and even to people who were shipping butter in from outside points, and they have promised to do better, and have done so. If such education as we get here could be brought home, and the aldermen in the cities begin to realize what is being done along these lines, I am satisfied that Minnesota will have just as good laws as any other State in the Union, for I believe that Minnesota is just as progressive and aggressive as any other State.

Gentlemen, there is one other matter I wish to touch upon, and that is regarding the flour question. It is my duty as sealer to test the scales at the flour mills. Last summer I tested 340-odd scales in those mills. Of course all these scales were not used for weighing flour; some of them were small combination and platform scales. Every scale used by the milling companies to weigh flour is inspected by their own scale men every day. Every milling company has a scale expert who does nothing else but test scales. I had a set of sealed weights with me when I did the testing there, and I did not find a single bad scale in those mills. They tested up splendidly, and I was rendered assistance that is rarely given when a sealer tests scales; at any rate, I did not find it in any other place. The scale

expert was with me, and when I came to test the scales every platform was taken out and the scale was cleaned thoroughly before I put my weights on it, and they were willing to do it, and assisted me in every way, so that the scales could be given a good fair test.

Now, in regard to Mr. Haskell's question as to flour sacks, I am not able to answer because I have not looked into the size of flour sacks because there has never been any complaint made on any flour weights at Minneapolis. And I want to say this, that there are sizes of flour sacks shipped East that are never used in Minneapolis. There are very few sacks of flour sold in Minneapolis that weigh less than $12\frac{1}{4}$ pounds. I understand that sacks are being put up for shipment that are very small. I will explain to you how they put up these small sacks. A platform is set on one of these small combination scales, or, in fact, there is a rod that comes up with a small platform on which the sacks are set. With these small sacks there is always a tendency for the flour to sift down over the top of the sack and lodge on the platform. To obviate this a sheet-iron cover sets over the scale and is slanted up underneath the platform, so that all the flour falling over the sack goes right down onto the floor, and not a speck of it gets onto the scale. That is done so that they can weigh those small packages accurately, and a very high-grade scale is used for that purpose. Of course, even though they may be the very best scales, there may be a discrepancy in the weight of the filled sacks.

MR. HASKELL. That has been my understanding, that the milling companies were very careful of the character of scale used, and from what you say there is no valid reason or excuse why their sacks of flour should not hold out well. We had a case of short weight not long ago. I will not mention any names, but it was one of your prominent Minneapolis concerns. The concern was prosecuted, and the maximum fine was imposed, which was \$100. We have now in our office a number of cases that we are about to take up. That is the reason why I asked about those sacks. It is a common occurrence for us to find here that sacks of flour that should hold $6\frac{1}{2}$ pounds actually hold 5 pounds 10 ounces, 5 pounds 11 ounces, or 5 pounds 12 ounces. We have figured out the shortage, and I made a statement in my annual report, which the press took up, that the loss to the city of Washington from this cause amounted to over \$40,000 a year. I have made a statement that the shortage of flour put up in sacks was enough to pay the running expenses of the mill manufacturing it. If that is a fact, we can not prosecute too often, because there is no reason why the consumer should pay to any flour concern, in short weight, the expense of running the mill.

THE CHAIRMAN. It is another illustration of the point that I mentioned a while ago, that through these meetings we may reach

manufacturers more quickly than we otherwise could. I think it is a very important function, and one that I had not thought of before. There is no reason in the world why you should not find out at this meeting where the short weight comes from in your city.

There is one question I wish to ask you. What is being done in the other cities in Minnesota? Is there anything at all in the way of a State organization?

Mr. SATHER. St. Paul and Duluth both have sealers. Duluth has had sealers for a number of years. St. Paul had a system years ago and dropped it, but took it up again a year ago last January. There is no State organization.

The CHAIRMAN. The next State is Montana, represented by Mr. A. N. Yoder, secretary of state.

Mr. YODER. Mr. Chairman and gentlemen, I will use only a few moments of your time. I have no report. I will tell you a few things, perhaps, that we do, and a great many more that we do not do. Montana, you know, is comparatively a new State, and that accounts for a great deal of what I may say. At the present time we have perhaps not over 500,000 people in the State, scattered over a vast territory, and it costs a great deal for a sealer to look after the interests of the people. Whenever there is a new office created, it is put under one of the State officers without extra compensation, for the reason that we are always short of money. That is the reason why the secretary of state at the present time is also the sealer of weights and measures. You all know, who know anything about the work, that it takes all the time of one person to look after the sealers if he wants to do it right; and that he has no time to attend to other State duties.

I came here three years ago, and I will say that I learned a whole lot. I went home and made a report to the governor, and we agreed that we would not ask for very much. But I want to tell you this first, that the State of Montana does not own a set of standards. I could not test a scale if I wanted to, and I did want to, and could not, because I have nothing with which to do it. I asked the legislature to appropriate enough money to buy the paraphernalia; but the reply was that the money had run short, and I would have to wait a little longer.

A few of the cities and communities have sealers, but they do very little work. It is mostly a position that some disgruntled politician happens to get by appointment of the mayor. At the present time the county clerks are sealers. As a rule they change office every two years. Before they learn their duties they are succeeded by new men, who have to go over the same ground. Just as long as it is that way we can not expect much benefit.

Last year after the legislature refused to get the standards, the governor wanted me to attend the conference, but I told him it was of no use to come and listen, if the people were not ready to take the advice of the States that had had experience. In addition the legislature met just at the time of the conference, and you know that the secretary of state has plenty of troubles when the legislature is in session, without hunting more at Washington, so I did not attend the conference. The governor, however, has promised that he will take the matter up and help all that he possibly can to bring about uniform laws and make the work effectual. I am perfectly willing to hand the duties over to some other person who has time to look after it, if the legislature is willing to appropriate the money so that he can be paid.

Now, as far as measures go, there is very little measuring done in our State. Everything is sold by the pound, except berries; and I suppose that is true of all the Western States. Berries are sold by the box, and not as quarts or pints. The boxes are always short of standard measure. I believe the only exception to the custom of selling by weight is in the case of cranberries. They are always sold by the quart.

Mr. REICHMANN. Dry?

Mr. YODER. Liquid; we have the liquid measure. Apples are sold by the box, without any standard as to how large that box shall be. There are so many tiers of apples, they tell you, in the box, depending upon the size. They are not sold as so many pounds or bushels. The only case where they are sold by the pound is when you buy about two apples for a quarter, or something of that kind. This, however, is not true of coal. A year ago the legislature passed a bill making the coal-mine inspector also the sealer of the scales at the mines, by which the miners are paid, and by which the coal is sold to the wholesaler. He was furnished with a set of standards to test the scales under him and I believe that he does good work. But when it comes to the retailer, there the coal-mine inspector's authority ceases, and it is then supposed to come over to the rest of us. And I suppose it is in most other States as it is in Montana, that every man buying coal imagines that he does not get 2,000 pounds for a ton; and very often we are asked to go and test the scales. I have been asked several times since I have been in office, and I have nothing with which to do it, and I just have to let it go. I thought it was of no use to go around hunting trouble unless the State furnished the paraphernalia with which to make the trouble.

We appreciate the work the bureau is doing, and you can depend upon the Representatives in Congress from Montana to do all they possible can for a bill—I will not say this bill, but a bill which they believe is right. Senator Carter wrote to me a year ago to send him

all the information I had gathered, and I did. I also referred him to the secretary of our conference for additional information, and I know that when this bill goes before Congress, if it is in such or can be put in such shape that it will appeal to them as being beneficial, they will work for it very heartily. I hope that we can get some such bill passed in this session of Congress, for it will help us a great deal next winter in trying to get other laws, in accordance with this law, passed by our Montana Legislature.

I think that is about all I can tell you. That is all we are doing, and that means we are simply doing nothing.

The CHAIRMAN. I think we will have to see, somehow or other, that the State of Montana is provided with standards. If we can not do it in one way, we must try to do it in another.

Mr. YODER. When I asked the legislature to appropriate money for that purpose they said that most of the States were provided with standards, and that I should try to get them that way. I wrote, I think, to the Department of Commerce and Labor in regard to it, but was informed they could not be furnished, and so I dropped the matter.

The CHAIRMAN. That was probably for the reason that we had not at that time either the time or the means to make any new sets; but there are some remnants of the old sets left, and I think we can find a way to buy the remainder, so that perhaps we can fit you out before very long. We will fit you out with standards if you will agree to use them.

Mr. YODER. I will agree that we will use them.

The CHAIRMAN. I think the bureau is without doubt authorized to furnish these; do you not think so, Mr. Fischer?

The SECRETARY. Oh, yes; there is no doubt about that. The model law which we adopted in the 1907 conference gives our attitude in the matter. In that proposed law it was provided that the Bureau of Standards should supply to any State or Territory or the District of Columbia a set of weights and measures, under certain conditions, but it would be a waste of good apparatus to furnish any State with standards until those conditions had been complied with.

The CHAIRMAN. Mr. Yoder has agreed to comply with those conditions.

Mr. YODER. I was interested in what was said about the milk bottles. I do not believe there is a milk bottle in the State of Montana that holds a quart or pint. But when that question is raised the milk dealers say, "How do you know that your quart measure is correct?"

The CHAIRMAN. We will agree to send you a quart measure next week.

The SECRETARY. There is no trouble about the standards. We could supply those immediately, so far as that is concerned.

Mr. YODER. If I could get part of that paraphernalia perhaps next winter the legislature would pay for the rest.

The CHAIRMAN. I think you will need the money for the secondary standards for your city officials.

Mr. YODER. Yes. A few of the counties have very fine sets, but they do not use them; and the department has no means of making them comply with the law.

The CHAIRMAN. That is just the trouble with some of the States that have standards. It ought to be a condition that they use these standards.

The next State is New York. We will now hear from Dr. F. Reichmann, superintendent of weights and measures.

Mr. REICHMANN. The Legislature of the State of New York is exceedingly conservative, and it does not enact legislation until it finds necessity therefor. Weights and measures, although the fundamental basis of all trade, have not received proper or adequate attention at the hands of the legislature, there having always been so many problems to consider that it has been left to the individual to protect himself in this matter. But it has come to the realization of the prominent people of the State that weights and measures legislation and the protection of the people in the quantity of the commodity they buy is now a crying need. Some of the greatest men in the Empire State—and this State has been second to none in the public-spirited men it has produced and has to-day—are interested in this subject. His excellency, Gov. Charles E. Hughes, being interested in efficiency and square dealing, necessarily is interested in protecting the mass of the people in the matter of weights and measures. The Hon. A. E. Merritt, the Hon. James W. Wadsworth, jr., the Hon. George H. Cobb, and many more I might mention, are in favor of efficient weights and measures legislation; and it is to these men and to those organizations and societies which have taken an active interest, not to mention some prominent dealers, such as the Hon. B. R. Lansing, of Rensselaer, and Mr. W. E. Woodbury, of Rochester, and many others, who have taken active interest, that whatever progress has been made in New York State, the credit is due.

I, as the head of the office of weights and measures, have made every effort to get an effective administration; and in spite of inefficient laws, the appeal to the people for a square deal has always met with a prompt response. I do not mean to say that it has been smooth sailing; far from it; the stretches of rocky roads have been numerous, the brambles and thorns on the sides of the rocky paths have been sharp and thick, but for all that there has never yet been an instance when it has been necessary to turn back. The department of weights and measures has tried and, I think, has succeeded in being as efficient as most of the departments of the State, and there is probably

no business concern in the country in which the individual departments are managed with as much impartiality and efficiency as the individual departments of the State of New York.

The details of some of the work that has been done since I last appeared at this convention would be lengthy, and as many of them are already a matter of public record in my last report to the governor, I submit the matter to you in that form. There has been a great deal of work done that is not shown in the report. A special report on the conditions of New York City is in preparation, and, although I had hoped to have it ready for this conference, yet there are so many details connected with investigating the entire weights and measures situation in this large city—that is, investigating all branches of trade where weights and measures enter—that the preparation of statistical data is long and tedious, especially when the conditions of New York City are probably worse and more inefficient than those of any other place in the world.

The CHAIRMAN. The next State is Ohio, represented by Prof. Thomas of the Ohio State University.

Mr. THOMAS. Mr. Chairman, it is a pleasure to me to report some moderate but substantial improvement in the weights-and-measures situation in Ohio since we last met. We move rather slowly out there, on large questions at any rate, and some of the people at least in the State are beginning to look upon the question of weights and measures as one of the large questions. Most of you know already that there is no power of inspection that amounts to anything in Ohio. The State officer has no power; the county auditors, who are ex officio county sealers, have no power; nobody has any power under State law. The powers that are active there are solely those which are given by city ordinance.

In the early days the State furnished each county with a set of standards, and the county auditor was made county sealer. A law was passed at a later date making these officers responsible for the care of the standards given them, and responsible for double the value of the standards in case of loss or damage, to their successors in office. I instituted a little inquiry along that line this last year and found that out of the 88 counties which were so furnished in the State 7 counties now report complete sets in good order; 18 counties report not a single piece on hand; 51 counties range from a single piece missing to a single piece on hand; and 12 counties did not report. This affords a clear indication of the ineffectual character of the law as regards the duties of county sealers of weights and measures.

A call was made for a meeting of city and county sealers last May, and we arranged with the auditor of the State for our meeting to be at a time when a considerable number of county auditors would be in the city. Considerable interest was manifested. We had the good

fortune to have Dr. Reichmann with us to help in the discussion, and we had a few very live city sealers there. Unfortunately we have lost the services of one of the best sealers in the State, Mr. Owen Kane, of Cleveland, who was sealer during the Johnson administration in that city. The administration having changed, Mr. Kane is no longer with us. I have not gotten in communication with his successor, but I have heard good reports of him, and am in hopes that the good work of Mr. Kane will be continued.

With regard to legislation our legislature is now in session, and a bill or bills will be introduced shortly relating to weights and measures. It seems to me, after a careful review of the situation and consultation with some of those who are most closely connected with this subject, that for Ohio, at least, the best thing to do is to provide some means, adequate and effective, for enforcing the laws which we now have on our statute books. They are not perfect; there are several things to be desired in them; but it seems best that we should go ahead and get the good which may be obtained, and it is considerable, through a proper enforcement of the laws now on our statute books; and for that reason the principal effort that will be made in attempting to secure legislation, will be to provide for the appointment of a State commissioner of weights and measures, and of a sufficient number of deputies or inspectors under him to go through the State very carefully and completely within the coming year, and to use the facts that will without doubt be divulged, as a reason for other legislation at the coming session.

We are in a measure fortunate in the legislative situation at the present time in Ohio. The people of Ohio, like the people of many other States, have been deeply concerned in the question of the high cost of food, and it has become a matter of such general public interest as to lead the legislature to appoint a joint committee of the two houses, which has gone by the newspaper name of the "High-price food probe committee." That committee has been holding sessions, and was soon led to see that the question of the cost of living was made up not only of the price charged for necessary commodities, but also of the quantity obtained by one who pays the price. In other words, that the question of weights and measures was intimately and necessarily associated with the question of the price of foodstuffs. So that committee has taken up the question, and has requested the privilege to be allowed to introduce a weights and measures bill or bills, and to push the same with all the influence of the committee; and that is to be done. At their request I appeared before the committee on Monday night last, and reported on a number of things, the information I had received here at these conferences being of great value in that hearing. They have requested me to come again, after returning from this conference, to give them the benefit of the

further light which I may obtain here; and I have found a number of things which will prove of great interest and value to them.

The reports of city sealers and my personal experience as a consumer, indicate that there are evils of the same sort existing in Ohio as in Massachusetts, Rhode Island, New York, and other States from which we have had definite reports.

One point is of interest, bearing upon the question that has been spoken of considerably here, namely, the weight of butter prints. The city sealer of Columbus has taken a very short cut to the solution of that problem, and it seems at present to have been effective. Many complaints of short weight in butter prints having reached him, he undertook to obtain information as to the facts by going about and weighing butter prints in large numbers. As a result he wrote to the creamery men who were supplying this butter, advising them of the facts which he had found, and requesting them to remedy the trouble. Some of them met him in a fair-minded way; others met him in a contrary spirit (something like the Chicago frame of mind, I should judge); but when a creamery man objected to making good the weights of his prints, the sealer sent him a very short letter, something like this: "The law requires 16 ounces in the pound of any commodity sold by the pound. We have been advised that your products do not conform to that law. Unless by —— your products are found to conform to the law, your agents and dealers in your butter will be arrested and prosecuted." That brought a compliance with the law; and by way of comment on that, I think the position taken was exactly right, because these dealers have in their places of business scales which have been tested and certified as correct, and they have it in their power, when they receive shipments of such butter, to ascertain whether they are getting full weight or not, and they have no right to claim that the responsibility belongs to the manufacturer. They have the chance to find out whether the butter prints are full weight or not, before they sell them; and for that reason I think our sealer was right in the stand which he took.

To give an illustration, a certain creamery, after consulting him about the matter, modified its print-cutting machine until, after cutting as many strips as were necessary to get the machine adjusted, butter was being cut not only 16 ounces to the print, but 16 ounces and a quarter, for the reason that it was proposed to meet the objection of shrinkage from evaporation. Our sealer, after consultation, adopted the interpretation of the law that the buyer was entitled to receive 16 ounces of butter to the pound, not something which, butter and water combined, had weighed 16 ounces a week earlier. The difference between the weight of the prints as now made, and those previously furnished, amounts, as the records show, to the sum of \$15,000 in one year, from one creamery. Our public is waking up

to the situation, and I think the prospects are quite favorable to a, perhaps not rapid, but a sure and substantial progress, which is the best kind of progress.

The retail grocers of the State have, first by cities and later in their State organization, discussed and finally adopted as desirable, the plan of selling dry commodities by weight only, thus abolishing measures, except possibly in the case of perishable fruits, such as strawberries, raspberries, etc., which would be damaged by handling. They have prepared a bill along this line, which, I am told, will be introduced by the legislative committee of which I spoke.

I was exceedingly interested in what Mr. Haskell had to say on the bread question. That is an open question in Columbus, and one which is being agitated. He spoke of the equivalent in money of the 2 ounces of short weight in the average loaf here in the city of Washington as a number of hundreds of dollars. For curiosity, I figured it out. It amounts to \$1,375 a day. That is one fact which I am going to take back to Columbus, and I think there will be action on the bread question there before long.

The CHAIRMAN. I am sure we all miss the interesting talk of Capt. Pettis, deceased, who was with us at the last meeting and represented Rhode Island. We shall be interested to hear from his successor, Mr. W. F. Goodwin, State sealer of Rhode Island.

Mr. GOODWIN. Mr. Chairman, my first duty as the representative of Rhode Island is a sad one. I feel it a painful duty to report the death of Capt. George H. Pettis, who was for many years the sealer of the State of Rhode Island, and performed his duty in a true and faithful manner. Mr. Pettis was a man who was universally respected in Rhode Island; a man of sterling character, very democratic, and one who made friends wherever he went. I presume that some of the people here have met him on occasions of this character and can vouch for what I say. He passed away one year ago this month, and was honored in death by the State and city organizations and laid away in an honorable manner. I hope and trust that this organization will take some action in the way of passing a suitable resolution in order that we may have a record on the minutes relating to the death and the character of my worthy predecessor, Capt. Pettis.

Mr. THOMAS. Mr. Chairman, it was my intention to offer at a later time a motion to this effect, but as it has been alluded to at this time I beg to be allowed to offer a motion that a committee be appointed to draw up suitable resolutions expressive of our appreciation of the services of Mr. Pettis as a member of the association, of our sense of loss in his departure from us, and of sympathy with those intimately connected with him, and that the resolutions be spread upon

the minutes, a copy furnished to the press, and an engrossed copy to his next of kin.

The motion was seconded and unanimously carried.

Mr. GOODWIN. After listening to the delegates from the different sections of the country I feel highly honored in being the delegate from Rhode Island. I believe Rhode Island comes the nearest to perfection, in regard to laws and methods of sealing, of any State in the Union. It is a well-known fact that we are a small concern in some ways. In some manufacturing industries we lead every other State in the Union. There is not a subject which has been mentioned here to-day, with the exception of the question of the sale of bread, that is not fully covered by our laws, and in such a way that it is possible to enforce them. Every law regarding sealing in the State of Rhode Island, and the penalties for violation thereof, can be enforced, and I believe it was through the wisdom of my worthy predecessor that this has been made possible. Although not a particularly aggressive man, he nevertheless, in a diplomatic way, and through his influence, brought about the passage of these laws and made it possible to execute them. This matter of the sale of bread is now before our legislature, and it is a very serious question. I have talked with several of the legislators in regard to the matter, and it is a subject on which I would like to be better informed. I would like to get the written opinions of some of these able gentlemen who have brought up the subject here to-day before I leave for home.

I have made a note of some things discussed here, and although I dislike to take the time, still I would like to express my views upon them; for instance, regarding the matter of tolerance. We have no tolerance in the State of Rhode Island. I have some of my reports here, including the sealing laws, which will probably give you a better idea than I can of what our law means. I believe that when a man violates a law there should be no way of escaping the penalty. If there is no tolerance, the law says in so many words what it means. If there is a tolerance, it gives a chance to drop down or go up. I have looked into the subject very carefully, and have sometimes thought it was wrong to have a tolerance; but after due reflection and consultation with more able men than myself I have come to the conclusion that tolerance in any form is all wrong.

We leave this subject entirely with the sealer. He is the man to judge what variation he will allow. Then when it is necessary to take a case into court, which, I am sorry to say, we have been obliged to do several times, there is no question as to the meaning of the law. If you have violated it, you are guilty, and that is all there is to it. There are no "ifs" or "ands."

Regarding the sale of berries, our law is a very short one. I will read it:

Chapter 172, General Statutes:

SECTION 8. Nuts and shell beans and all kinds of berries, *whenever sold by measure*, shall be sold by dry measure, and any person who shall sell any nuts or shell beans or any kind of berries by any measure other than dry measure shall be fined not more than \$20, etc.

There are no berries sold by the quart, peck, or bushel in the State of Rhode Island. They are sold by the basket; not by measure. So that we have never tried to enforce any law regarding measures for sale of berries.

Mr. YODER. Do you think that selling by the basket protects the people?

Mr. GOODWIN. I do not think it does. Judging from my own experience, when a person buys berries he looks them over, and if a box attracts his attention, after being told the price per box, he will likely say, "How much does it hold?" The dealer will probably reply, "I do not know; I never measured it." Since I have been a sealer I have asked these apparently foolish questions.

Mr. YODER. Do you not, as a rule, hear people on the outside give the price as so much a quart?

Mr. GOODWIN. No; I never heard that question asked. I never heard this matter advocated in our State.

I will tell you how I feel about it. Berries are a luxury, not a necessity, and I do not believe that there should be any law to govern this matter. Berries shrink tremendously. Everybody knows that who has ever picked or raised them. I do not believe that any luxury should be regulated in that way unless the dealer claims to sell a definite quantity. Of course, if you buy a basket as containing a quart, and do not get a quart, the man is cheating you.

The question of the sale of bread came up while I was a member of the legislature, two years ago. There was a tremendous outcry among the bakers against the proposition of having any legislation regarding the methods of selling or weighing bread, and the sentiment was so strong against it that the subject was finally dropped. This year we have a bill in the legislature, and it is a question whether or not anything will be done. I want to get the personal views of these other gentlemen on the subject before I go back to Rhode Island, because I want to help along anything that protects the common people.

Mr. HASKELL. Will you please tell us what objection was made to that legislation?

Mr. GOODWIN. The principal objections were that it would bring a hardship on the bakers; that they could not conscientiously do what the bill called for; and that they would have to be dishonest in order

to comply with the law as framed. The bakers offered very logical reasons why they could not comply with a law such as was introduced in the assembly. Finally the bill was dropped, and it did not seem as if it would ever be taken up again. No bill was introduced last year, but this year a bill, which I think came through the agencies of other States—probably Massachusetts—was introduced, and it looks as if there was going to be something done about it.

Mr. HASKELL. I am much obliged to you, Mr. Goodwin.

Mr. GOODWIN. Mr. Chairman, I will now conclude my remarks, hoping that I will be able to get some data on this subject of the sale of bread to carry back to my State.

Mr. PALMER. Mr. Chairman, as we are going to see President Taft to-morrow noon, and there is a lot of interesting business to come before us, I move that the hour of the meeting to-morrow be 9 o'clock, and that all the members come here promptly.

The motion was seconded, and after some discussion it was carried.

Mr. KJELLANDER. Mr. Chairman, I would like very much to hear the rest of the reports, especially that of Mr. Smith, who is from a neighboring State, and who, I understand, is pretty well posted on weights and measures. It is now late, and I think it would not be fair to the remaining gentlemen to give them only a few minutes time. I think we ought to leave the reports from Vermont and Wisconsin until to-morrow morning, and I therefore move that we now adjourn, and that these two reports go over until to-morrow morning.

The CHAIRMAN. The Chair would call attention to the fact that a couple of committees are to be appointed.

As the committee on resolutions in regard to the death of Capt. Pettis, the Chair will appoint Prof. Thomas, Mr. Haskell, and Mr. Goodwin.

The committee to prepare a constitution and by-laws will be Mr. Palmer, Mr. Kjellander, and Mr. Rice. If this committee will look up the previous action and make recommendations in regard to changes, etc., perhaps we can pass on them to-morrow.

Mr. REICHMANN. Mr. Chairman, can we not have an evening session to-night?

The CHAIRMAN. So far as we are concerned you can.

After some discussion, and the withdrawal by Mr. Kjellander of his motion, Mr. Reichmann put his suggestion in the form of a motion, which was seconded and carried.

A motion to adjourn was carried, and accordingly at 6 o'clock the conference took a recess until 8 o'clock p. m.

THIRD SESSION (EVENING OF FRIDAY, FEBRUARY 25, 1910).

The meeting was called to order at 8.30 p. m., by the chairman, in the office of the department of weights and measures of the District of Columbia.

The CHAIRMAN. Gentlemen, we have two of the States to hear from. I understand it is your pleasure to finish up here this evening. I am inclined to think that we ought to reserve our questions until the gentlemen finish speaking. We got started the other way this afternoon, and I regretted before we got through that I did not rule that the questions should come at the end. However, the meeting was entirely informal, and some questions were asked right at the point where they would do the most good. But as far as possible, please reserve the discussion until the end of the report.

The next State to be heard from is Vermont, represented by Mr. P. F. Hazen.

Mr. HAZEN. Mr. Chairman and gentlemen, as I said this afternoon, my report will be very brief. As I explained at the December, 1908, conference, the legislature of Vermont was then near the close of its session. It meets only once in two years, and as I was not present at the 1907 conference, and did not know until 1908 of the model law which was suggested at the 1907 conference, it was then too late to bring the matter before the legislature, notwithstanding that some missionary work had been done. I am very glad to say that Gov. Prouty is a great deal interested in this matter and plans to make recommendations in his retiring message. I have had considerable correspondence with him and it is now being arranged to hold in Vermont a conference of city sealers of weights and measures, at which will be present the governor, the State treasurer (who is custodian of weights and measures), and such business men as may be interested in this subject. It is expected that the meeting will be held before the October assembling of the legislature, and I feel very confident that a bill will be introduced at the next session of the legislature. Of course, as the gentleman from Chicago stated to-day, what a legislature may do is rather an unknown quantity, but at the same time it looks very encouraging, and I think something will be done.

A gentleman from a neighboring city, who saw my name in connection with these conferences, wrote me quite fully, and finally

came to St. Johnsbury, and I had a long session with him. He was a coal dealer. He said, "It is difficult to sell coal honestly and compete with dealers who use fraudulent means. One has either to meet them in those fraudulent means or go out of business" He was very emphatic with reference to this question, and when we hold that conference he plans to be present. So that while we have not accomplished anything since the last meeting other than missionary work, I am sure that something will be done soon.

So much for Vermont. Now, as to these conferences which have been held here. As you know, this is the fifth one, and I think that Dr. Stratton and his associates may well be congratulated upon what has been accomplished. The progress may seem slow to some, but I know that rumblings are being heard from far and near, rumblings of dissatisfaction with reference to false weights and measures, and more particularly with reference to the fraudulent use of weights and measures. The purchasing public is waking up to the fact that it does not know what it is buying; it does not know whether full value is being given. Especially in these times, when so much is being said about the high cost of living, people are going to look into this subject of weights and measures. To my mind it is one of the most important subjects that was ever brought before the country, with the possible exception of the pure food question, which was agitated a few years ago and which has made such substantial progress. As I say, I think Dr. Stratton and his associates can well be congratulated in having worked this matter out, and instituted these yearly conferences.

Of course, in each conference, a great deal of the ground is gone over which has been touched upon in previous years; but we must remember that probably 50 per cent of the delegates in each conference are here for the first time, and unless this ground is gone over they do not get the whole history of the case; they do not get as much out of it as they otherwise would. So that I think the conference has been very profitable, and it seems to me this is the best session, Mr. Chairman, that has ever been held.

Mr. REICHMANN. Mr. Chairman, I feel that Mr. Hazen has said very little as to the amount of work he has been doing in Vermont. The prominent coal dealer referred to by him is interested in the subject of weights and measures, and was in my office about a week ago and said that Mr. Hazen is rapidly becoming a father confessor of all the people who want to get just weights and just measures; and that if there is one man in the State of Vermont who can get that law through, that man is Mr. Hazen. He also said that Mr. Hazen favors such a law, and that there is no question in his mind but that there will be legislation passed there this fall.

The CHAIRMAN. I have noticed one thing in regard to this subject of weights and measures, that when you once plant the leaven in a State, it never ceases to grow. I do not know of a single case where a State or a city or other community has gone backward in weights and measures.

Mr. PENNELL. Mr. Chairman, I want to thank you and Mr. Fischer for sending Mr. Holbrook to the State of Maine. That sort of thing is what we need.

We have made a little progress. From my point of view, we have the best milk-bottle law that there is in the Nation. Our city, Portland, has not, however, done enough to assist the State law. Portland has recently passed an ordinance in regard to the sale of coke and charcoal in bags. I brought Mr. Holbrook a copy of the ordinance. The city passed another ordinance prohibiting junk dealers from buying or selling milk bottles in any way, shape, or manner. About a fortnight ago we gave the dealers 10 days' notice to dispose of what they had in their possession, and I think, with the help from this bureau, we may, at the next meeting of our legislature, be able to get a State sealer, which we certainly need. The State treasurer, according to our law, is custodian of weights and measures.

Mr. Holbrook visited Portland and made a little examination before he called on me as city sealer. Then I took him around to the lowest class of merchants that we have, and later to the middle class. He found a great many short-weight packages, and since he was there I have notified our Portland creamery, the largest concern that we have, that when I returned, if I found any more of their packages short weight, they must not blame me when the county attorney gave them a call.

I hope the Bureau of Standards will keep up its good work and help us along in the State of Maine.

The CHAIRMAN. I neglected to mention one object we had in securing an appropriation from Congress, and I am glad your remarks have suggested it to me. You would be surprised at the number of city and State officials, especially city officials, who do not know anything about the Bureau of Standards. They do not know where they can get weights and measures; they do not know what paraphernalia they need; and I can assure you that our inspectors are sent out with the object in view of assisting such officials, just as much as they are for the purpose of making inspections. When they go into a place, no matter how they make their inspections—they can make them without the knowledge of the city officials if necessary, and they usually do—they are instructed to meet the city officials before leaving, and to ascertain how the Bureau of Standards can be of help to them and to establish friendly relations. Because it is only in that way that the bureau can reach the people. The time

is coming when you are going to do the inspecting, and we want to establish friendly relations with you. We want the bureau to be known to city sealers as a place where they can write and find out where they can get what they ought to have. We want it to be a clearing house for sealers.

Mr. HAZEN. I may state also, directly in line with Dr. Stratton's remarks, that on one or two occasions I have been asked to make an informal address with reference to these conferences and the work of the Bureau of Standards. I found the people very much interested in this subject and in the information that I was able to give them as to what this bureau is and what it is doing.

Mr. PENNELL. One word, Mr. Chairman, and that is that I hope you will not stop with what you have done in our State, but that you will have a thorough investigation made before the meeting of our next legislature, so that a report may be presented to that body.

The CHAIRMAN. The next State is Wisconsin, represented by Prof. Leonard S. Smith, State sealer of weights and measures.

Mr. SMITH. Mr. Chairman, I can not help but wish that I were going to address this meeting on some other subject than weights and measures. From the standpoint of State pride, I wish I might tell you something about how the State board of control runs its eleemosynary institutions, or the way in which the State of Wisconsin has established a tax commission, or the way in which the physical values of our railroads have been fixed, or the rate commission, by means of which an able and fair-minded body of men stands between the corporations on one side, and the common people on the other, and are square to both. If I could discuss with you some of these questions, I think I could be justly proud of the able way in which the State has handled these important matters.

On the contrary, when I come to think of the situation that confronts me in Wisconsin regarding weights and measures, I am anything but proud. I am not sure but that Wisconsin is near the tail end. We certainly are a long way in that direction. For this reason I am not able to give you any illuminating address, or to furnish information of value.

In a few words, let me say that our conditions are very similar (although not so favorable) to those in Ohio, as described this afternoon. We have a very fine set of State standard apparatus which the Government furnished us about the time of the Civil War. This apparatus is carefully mounted in a special room in the engineering building of the university. We have a very elaborate system of laws, every link is correct, strong, and perfect, but a connecting link is lacking.

In brief, our law states that there shall be a State sealer who is the professor of engineering. The duties of this office have devolved

upon me for the past 10 years. They are not very heavy. The law also provides that the county treasurers shall be ex officio sealers of weights and measures. I should say that about a dozen counties in the State out of 60 have availed themselves of the law. The law is mandatory, but it has not been complied with. Out of 60 counties, about a dozen have secured standards which we have calibrated. There is a very strenuous penalty provided, which I would like to read later. I do not think any State in the Union has anything so severe. It leaves nothing to be desired as far as severity goes. But, unfortunately, there is no provision which compels the city or town or township authorities to enforce the law. It is recommended, and I think we would all be glad to have it carried out, but no machinery of the law is provided to bring it to pass; so that this whole elaborate system falls to the ground. Until less than a year ago, May 21, 1909, there were no penalties whatever provided for illegal weights and measures. This beautiful State apparatus, and the State sealer were ready to seal standards, but none were offered. What the law lacks in continuity it seems to make up in severity of penalties, as will be seen by the following quotation:

Any produce merchant, warehouseman, miller or storage, forwarding or commission merchant, or any other person who shall wilfully use false weights or measures in the buying or selling of any commodity or thing and thereby shall cheat or defraud the seller or buyer of any such commodity or thing; or any person who shall sell or offer to sell or have in his possession for the purpose of selling, any device or machine to be used or calculated to falsify any weight or measure, or any person who, wilfully with intent to cheat or defraud the buyer or seller of electric current, gas * * * water or steam, etc.

It includes a long list, and I believe there is nothing left out. For a violation of any of these provisions the law provides that the offender "shall be punished by imprisonment in the county jail not more than one year or by fine not exceeding five hundred dollars." It is a pretty strong penalty, but fortunately for the tradesmen of our State there is no machinery to carry it out.

Now, largely through the interest which your inspector, Mr. Holbrook, aroused in our State, this matter has been brought to the attention of the public. My duties are quite away from this line of work, as you would naturally expect, and while I am filled with an honest desire to help the State of Wisconsin we need some one to call our attention abruptly to the need of reform. I want to say that the work of this bureau in calling attention to the condition of affairs that obtain in Wisconsin has been very helpful indeed. The attention of the governor has been directed to these matters, and I think he is much interested. The dairy and food commissioner has been correspondingly interested. I have no doubt that when I go back ways and means will be found to initiate a needed reform. I am very

optimistic as to what can be brought about in Wisconsin by intelligent effort. All we need is some one to take a personal interest in showing up what the conditions actually are and the proper remedies. Of course, something else has to be done besides pass laws; you have to follow it up with well-directed efforts, such as Dr. Reichmann has done in New York.

The problem in Wisconsin, I think, is a little more difficult in some respects from what it is in most of the other States. The character of the population, the density, the size of the cities, their distance apart, all vary as greatly in going from the Illinois line to the Lake Superior boundary as you would find in crossing the continent from Massachusetts west. In other words, a law which would fit southern Wisconsin would not fit northern Wisconsin any more than a law that would fit Massachusetts or densely populated New York would fit Nevada. I say the problem is very much complicated by the fact that the northern part of the State is very thinly populated and that by a population which, in wealth, education, and otherwise, is distinctly differentiated from that in the southern part of the State. This matter will have to be gone into with considerable care and a great deal of thought will have to be given to framing the law so as not to make it too drastic at first and make the people rebel. Favorable public sentiment is necessary before you can hope for the greatest success in carrying out a matter.

There are one or two things I want to speak of which will perhaps be helpful and suggestive. At Madison, where I live, the university runs a creamery on quite a large scale. The butter is sold to all the dealers of the city.

Mr. KJELLANDER. They give full weight, do they?

Mr. SMITH. That is the point I am coming to. Not only that, but apparently the influence of the university is felt much further than in its own sales. The other stores have to compete with the same conditions. I think I am violating no confidence if I read Mr. Holbrook's report on that matter. He weighed a great many packages of print butter, and (without giving the figures) will say they varied through comparatively small limits. There were 25 tests made on the university print butter, and out of these there were only three that were less than 16 ounces. Now, while the five or six other dairies in the city did not measure up quite to that limit, yet there was a very general agreement in the size of the packages and a substantial compliance with the law. If you buy a package of butter in Madison you get practically a pound of butter. In talking this matter over with the professor in charge of making this butter, and who is an experienced man, the question was asked whether he could control the size of the print within reasonable limits, and he was sure that he could. He thought it was a comparatively simple matter;

that if they wanted all the prints to be a little less than 16 ounces it would be as easy, but no easier, than it would be to have them a little more than 16 ounces to the print. Now, contrasting that with the conditions which Mr. Holbrook found in Milwaukee—I will not take your time to read that—there is a striking difference. There was almost an equal unanimity on the other side; that is, the prints were uniformly smaller than they should be. I speak of this as showing how a single center can influence by its example a large community, or a comparatively large community, and also as showing that it is well within the limits of human endeavor to control the size of the butter package.

Now, in regard to the claim that butter loses weight by evaporation, I discussed this matter with the dean of the College of Agriculture only a few days before coming here, and asked him if, in his opinion, there were large losses due to evaporation. He laughed at the idea. He said that of course there are losses, but that, in his opinion (and he is an experienced man, brought up on a farm, for that matter), they are vanishing quantities, too small to be worthy of serious consideration for any of the ordinary limits of time butter is apt. to remain on the market. I would not say that in the course of a number of months or years they might not be significant; but, speaking practically, print butter does not stay on the shelves any considerable length of time.

The CHAIRMAN. Is it not usually wrapped in oiled paper, which also prevents evaporation?

Mr. REICHMANN. Yes; paraffin paper.

Mr. SMITH. Now, I do not like to sit down without expressing my gratitude again for the good that this visit has done me. I am sorry that I have not been able to come here before. I left duties that I would have been glad to attend to, and at this very time there is a civil engineers' meeting at Milwaukee that I would have liked very much to attend. But I felt that the State of Wisconsin had been misrepresented, or rather nonrepresented, long enough; and I am very glad indeed that I came here. I have received a great deal of help; probably no one here has received more help than I have, because I was in a condition to be filled up. I thank you very much.

Mr. NEALE. Mr. Chairman, for the information of Mr. Smith, if he wants to know where in his State there are four of the highest types of scale built, I will say that there are two at La Crosse and two at Osceola; and it might be interesting to him to know that Minnesota has charge and supervision of those scales.

Mr. SMITH. I am very glad to know that.

Mr. NEALE. They are large 100-ton scales. Minnesota, through its widely known (at least in the commercial world) weighing and inspection department, extends its service, for instance, to Valley

City, N. Dak., and to those two cities in Wisconsin, upon the industries in those States putting up a bond to secure that service. I did not know whether Mr. Smith knew of that or not. They are tested by Minnesota under the supervision of the State inspector.

The CHAIRMAN. Are these scales compared with the State standards?

Mr. NEALE. They are tested in this way: I have a steel testing car with a 19-foot base and a tonnage of 101,000 pounds, which is used for testing the large railway scales, together with standard test weights.

The CHAIRMAN. How did you get the weight of that car?

Mr. NEALE. It had to be originally ascertained on the best scales we had. We took possibly a dozen scales of the highest type that we had out there, all steel on concrete, and possibly of different manufacture.

The CHAIRMAN. Then your standard car is the average of that dozen scales; is that it?

Mr. NEALE. No; those dozen scales are expected to meet that car on any section.

The CHAIRMAN. I still do not understand how you got the absolute weight of that car.

Mr. NEALE. We had to do it by knowing the accuracy of those scales, by the original test of those scales by such means as we had at hand, and by watching the results closely from day to day, the State, the railroad company, and the scale makers each being represented by its expert.

The CHAIRMAN. How are these scales tested that you put the car on? I am trying to get back to your original standards. Are they tested with the State standards that you secured from the State of Minnesota?

Mr. NEALE. Certainly.

The CHAIRMAN. That is the point. The idea of a test car is a rather novel one to me, and I was simply interested to know what you went back to.

That finishes the regular reports.

Mr. KJELLANDER. I would like to say just one thing. Mr. Smith spoke of the pure-food commissioner. It is a very good thing to get information from the pure-food commissioner at the present time; but I do not believe that he should have charge of the administration of laws in regard to short-weight packages. The weight and measure of a package and the purity of its contents are separate and distinct from one another. I believe in the principle that quantity and quality go hand in hand; that they are the only two factors that should regulate the price of commodities; and not as the original-package men say, that quality and demand are the two things that ought to

regulate prices in this country. That is absurd. It must be quality and quantity.

I believe that the pure-food commissioners of the different States have all they can attend to without concerning themselves with weights and measures. I think that is one thing that the bureau ought to take into consideration when preparing laws, that the two lines of work should be kept separate and distinct from each other, and that the State food commissioner and the State sealer should have separate departments. They ought not to be connected, except probably to give each other information. If you want results in weights and measures work you can not get them under the State food commissioner.

Mr. HASKELL. Mr. Chairman, I think as the sealer from Chicago does, that if the weights and measures work is properly taken care of, the sealer has all that he can attend to, and he should not be connected with other work. The same is true of the other department mentioned by him. If one man has not only food to look after, but also the weights and measures, he can not, in my judgment, take care of either one satisfactorily to himself or anybody else. I think they certainly ought to be kept separate. There should be cooperation between the two. If the sealer of weights and measures should find any conditions that are unsanitary or detrimental to health, he should report the fact to the pure-food department, as we do here; but I think it would be a very unwise plan to connect the two departments.

Mr. SMITH. I am very glad to have the expression of opinion just made by the last two gentlemen. Our secretary of state asked me only about a week ago whether or no in my opinion the work of the two lines could be united. We have in Wisconsin a very effective food commissioner. He is president of the national association, and has made quite a name for himself. He has 18 or 20 inspectors who are going about the State all the time, and convictions are very, very frequent. I suppose the secretary of state thought that if the two departments were combined, the State could save money by using the same inspectors. I did not express any positive opinion about it; but I believe, from what I have heard here, that I should oppose that sort of thing. I came down here to see how to lose my job. I do not want to be State sealer; I have other duties; but I do not want to shed the responsibility until I find a way of doing so that will lead to the welfare of Wisconsin.

Mr. THOMAS. Mr. Chairman, this last point is a very live question in Ohio right now. I have been asked that very question by the legislative committee that is considering the matter as to whether it may not be desirable to put the weights and measures work in the hands of the pure-food commissioner. We have in Mr. Dunlap a very efficient officer in that line. I have heard direct expressions, and

emphatic ones, from two cities in which weights and measures are well looked after, namely, Washington and Chicago. I would like to ask directly for an opinion on the same matter from Mr. Palmer, of Massachusetts, and Mr. Reichmann, of New York, particularly as they have had wide experience in those matters. Do you think it is consistent with efficient work on the part of the weights and measures official that he be primarily at the head of another branch of the work, such as the dairy and food commission?

Mr. PALMER. I do not, Mr. Chairman. I do not even believe a local officer should be connected with any other department. We have, in some towns in Massachusetts, sealers who are also inspectors of milk or inspectors of petroleum. I do not object to it very strenuously in the smaller places where one man can take care of it, for the reason that it is sometimes possible by the combination of these offices to make an office of sufficient importance to give a fair salary to a man so that he can devote his entire time to the work; and when he is out inspecting one thing he can also have his mind on the other work. But we tried it in the large cities and it did not work. Our first experience was in the city of Worcester, and we found, after trying it for two years, that the work had gotten beyond the control of the local inspector, although he had three assistants. It became necessary to divorce them, and the separate office of inspector of milk was created. In our State department we have no food commissioners, as in other States, but we have a very efficient State board of health, which is, I believe, one of the best in the country. Massachusetts is one of the original States which took up the question of pure-food inspection. That has been in existence for at least 20 years to my knowledge, and has a force of four or five inspectors who do nothing else but collect samples in different sections of the State for analytical work. We have an analytical laboratory at the statehouse.

In my judgment, the work is entirely different and should be entirely separate, conducted in two different departments.

Mr. REICHMANN. In New York the problem is largely an administrative one, and the tendency of the times is to concentrate as many offices as possible under one administrative head, and to have deputies looking after those particular interests. I believe that the time is coming, unless the crying need of weights and measures inspection produces the establishment of laws too soon, when every State will have a department of inspection, not only for weights and measures in the narrow and restricted sense, but for testing all kinds of material purchased by the State. This department should prepare the technical part of the specifications on which the State purchases its materials, as well as the testing of them afterwards; the two go hand in hand. The question of specifications and the testing of materials is all weights and measures, of which the weights and measures used

in trade occupy only a restricted field. It is almost impossible to-day to get comprehensive, fair, and technical specifications for any commodity that you wish to purchase, or any kind of building material. But the problem itself is absolutely nothing but an administrative one, and I believe that weights and measures, in the larger sense, needs one man to take care of it. Even in its restricted sense, it very often depends upon the person himself as to how much time it is going to take. Now, I know it to be absolutely impossible for one man to take care of the situation in New York. To be sure we have nothing but insufficient and antiquated laws, but under effective, comprehensive laws, treating it purely as an administrative problem, it will even then take all of a man's time; there is no question about it. I think success is accomplished only by making one thing your primary interest. It is only a trick rider who can ride two horses at the same time.

Mr. PALMER. Mr. Chairman, I do not think we should lose sight of the suggestion of the Bureau of Standards, to the effect that the sealer of weights and measures should also be charged with the enforcement of laws in regard to inspection of gas, electric light, and water meters. If that is included, the duties will be increased enormously.

The CHAIRMAN. I had hoped to say something to-morrow in regard to that, but, as Mr. Reichmann says, this other phase of the work is very pressing and very important, and in many cases it is all one official can attend to. The things Mr. Palmer speaks of are going to be put under the sealers, as well as the broader field of work—namely, the technical side of specifications, spoken of by Dr. Reichmann.

Mr. REICHMANN. The most remarkable thing is that it is so difficult to find anybody who knows anything about drawing up specifications.

Mr. SMITH. What is the legal unit of gas in New York?

Mr. REICHMANN. I do not know. That is under the jurisdiction of the public service commission. The public service commission has just called a meeting of all the gas companies and their own experts on the subject to establish rules and regulations in relation to the testing of meters. Gas and electric meters in the State of New York are under the jurisdiction of the same commission.

The CHAIRMAN. I think we can answer that to-morrow morning at the bureau. You may be interested to know that an investigation under a special fund is now under way at the Bureau of Standards. Last year Congress gave us two special funds; one for weights and measures investigation, and the other to make an investigation of the photometric and calometric value of gases. The latter is also under way, and the public service commission of Wisconsin has been in correspondence with us and also some of the officials in New York.

Mr. SMITH. Can you report on those things?

The CHAIRMAN. No; but we can give you some definite information. It has taken us six months to get the apparatus together, and the calometric measurements are just being made now.

Mr. GOODWIN. Mr. Chairman, while Mr. Smith was reading the law regarding the sealing of weights and measures in his State I noticed one word which I think is dangerous in any law. I refer to the word "willfully." As his law is now framed, I believe it is an impossibility to convict. I have heard this argued by eminent counsel pro and con. The law of Rhode Island as it was put before the legislature read "willfully," and it was contended that it would not be possible to convict with the law framed in that manner, and it was finally changed to "knowingly." A man is not supposed to be so ignorant that he does not know that he is doing wrong. If he sells 14 ounces of butter for 16 ounces, if he has any intelligence at all, he knows he is doing wrong. Now, the word "willfully" in the Wisconsin law, in my opinion, would make the law null and void. I do not believe any convictions could be obtained under it.

Mr. SMITH. We have actually convicted a number of people under this law.

Mr. GOODWIN. How was it possible to prove that the man had willfully committed the offense? That is the question that came up in our State, and I merely tell you the reasons why we changed our law.

Mr. PALMER. We have the same difficulty in Massachusetts, and we will have that word stricken from the statutes. The chief plea one of our attorneys made in a case I had last Monday in court was the fact that his client did not knowingly violate the law. He said, "That is the fundamental principle of the old English law, that you must prove that there was intent." I am not an attorney, but I know that in two or three cases great stress has been laid on the point in question.

Mr. SMITH. Have you had many convictions?

Mr. PALMER. We have obtained a conviction in practically every case we have had.

The SECRETARY. Mr. Chairman, without going into much detail, I would like to go over very briefly the ground covered by the bureau weights and measures inspection up to date. I expected to do this at the bureau, where I have a map showing the different towns and cities visited, but that is not necessary.

Up to the present time inspections have been made in 22 States and 67 cities, an average of 3 cities to a State; so you see that the ground has not been very completely covered. At the same time, the work that has been done has been thorough and, considering the time that has been devoted to it and the number of inspectors, the progress has been very satisfactory.

The States and cities covered are as follows:

Alabama:	Louisiana:	New Jersey:
Birmingham.	New Orleans.	Bridgeton.
Montgomery.	Baton Rouge.	Atlantic City.
Mobile.	Maine:	Camden.
Connecticut:	Portland.	Elizabeth.
Bridgeport.	Augusta.	New Brunswick.
New Haven.	Bangor.	Trenton.
Hartford.	Maryland:	Ohio:
Delaware:	Baltimore.	Dayton.
Wilmington.	Cumberland.	Cincinnati.
Dover.	Elkton.	Cleveland.
Georgetown.	Havre de Grace.	Columbus.
Milford.	Michigan:	Toledo.
Georgia: Atlanta.	Ann Arbor.	Pennsylvania:
Illinois:	Detroit (Wyandotte).	Philadelphia.
Chicago.	Lansing.	Pittsburg.
Springfield.	Grand Rapids.	Harrisburg.
Pana.	Minnesota:	Tennessee:
Indiana: Indianapolis.	Minneapolis.	Nashville.
Iowa:	St. Paul.	Memphis.
Sioux City.	Duluth.	West Virginia:
Des Moines.	Mississippi: Jackson.	Charleston.
Council Bluffs.	Missouri:	Wheeling.
Davenport.	Jefferson City.	Wisconsin:
Dubuque.	St. Louis.	Madison.
Kentucky:	Kansas City.	Milwaukee.
Frankfort.	Nebraska:	Beloit.
Louisville.	Lincoln.	Janesville.
	Omaha.	Superior.

As Dr. Stratton said a short time ago, one of the main objects of our inspection was to create interest in this meeting, and also to stir up interest generally in the weights and measures situation. The inspections are not, perhaps, from one point of view, as valuable as those made by Mr. Kjellander; that is to say, there were not as many inspections made of commodities actually prepared for sale or those sold, which after all, I think is the most important inspection that can be made; but such inspections are only valuable in case prosecutions can be made on the evidence gathered, and this the bureau did not have authority to do.

Up to January 8, the total number of scales tested was 2,194, of which 64 per cent were correct and 36 per cent incorrect.¹

¹ Scales 3 or more per cent in error on 1 pound are classed as incorrect.

Total number of weights tested, 3,554, of which 79 per cent were correct and 21 per cent incorrect.

Total number of dry measures tested, 1,612, of which 59 per cent were correct and 41 per cent incorrect.

Total number of liquid measures tested, 147, of which 112, or 76 per cent, were correct, and 24 per cent incorrect.

Our inspectors also tested a large number of prints of butter, and packages of flour put up in bags, ready for sale. We have not had time to study these reports in order to draw any very reliable conclusions from them, but in a general way I think it can be said that in the cities where the inspection service is given support, conditions were very much better than where it is neglected. That, of course, might be expected. Another conclusion reached is that the ordinances in nearly all of the cities are not inclusive enough for the proper protection of merchants and consumers, and unfortunately most of these ordinances are not broadened by court constructions.

Mr. PALMER. May I ask if any weights, measures and balances tested and found incorrect had been sealed by the sealer?

The SECRETARY. Oh, yes; a great many of them. One of the worst cases was discovered on the last inspection made by Mr. Stimpson, one of our inspectors, who happened to run across two 2-pound weights in New Orleans, each of them over $3\frac{1}{2}$ ounces light. They had been passed by the city sealer three or four weeks before they were tested by Mr. Stimpson. Our inspections show precisely what has been reported here by all the sealers, local as well as State. That is to say, we find a great deal of fraud, and a great many incorrect weights and measures everywhere. We hope to get this data in shape for publication promptly after the first of July, but just how much of it will be given in detail has not been settled. If there are any special questions which any of the gentlemen would like to ask now, we will attempt to answer them.

Mr. PALMER. Mr. Chairman, if the bureau is in doubt about how much of those reports shall be published, I hope that doubt will soon be removed, because I believe in publicity in these matters. I hope all the information the bureau gets will be given the widest publicity. In view of the conditions in Massachusetts, I want your report to be read over the entire State, so that the people will know that I am not the only crank on these things, but that the Bureau of Standards is behind me.

The CHAIRMAN. I would also say, Mr. Palmer, that every day our attention is called to things which are wrong. They are the same things, in another way, that you meet with in your work in the States. Our policy has always been to try to put the manufacturer or official concerned right first. That is to say, I do not think it would be proper for us to publish this material that we find until

the proper State or city officials have been informed as to our results. But if after their attention has been called to the true conditions, and they have had opportunity to correct them, they do not do it, then I would say publish it broadcast. However, we have not made any decision in regard to the publication of the data. It will depend largely upon what we get, and how useful we think it will be to publish it; but certainly every official will get the information that concerns him. I see no objection at all to that.

Mr. PALMER. You would simply state in a general way what you found; you would not mention the names of individuals?

The CHAIRMAN. No.

Mr. PALMER. Just another question, Mr. Chairman, for the guidance of future meetings: Could not some arrangements be made whereby the different delegates might have an opportunity to prepare papers, so that we would not take an entire day to report on conditions in the various States? Wouldn't that help things along a little?

The CHAIRMAN. I think so, and I would like to see more definite papers. I have noticed to-day that the tendency all along the line was to discuss a definite topic. Somebody mentioned milk bottles, and that subject was discussed then and there; and the same inclination was manifested in connection with other subjects. It seems to me we have reached a point where we can have definite papers and definite discussions on particular subjects, which the executive committee or the conference should decide are the important and burning questions. I think that we should have a few papers prepared by the men who are the best posted on those things.

Mr. HAZEN. From my observation of the gentlemen at the Bureau of Standards on the several occasions that I have visited that institution, it looks to me as though they were a pretty busy body of men, and we do not want to impose too much upon them. At the same time, if it were possible to have a prearranged program of these conferences sent out to the delegates beforehand, with the suggestion that these papers be prepared, it seems to me it would be quite a timesaver. I appreciate that it is putting a great deal on the gentlemen who have this work to do, but if something of that kind could be brought about, either through a committee or a gentleman here, it seems to me it would be very helpful in saving time and in reaching the more important things that we wish to reach at these conferences. I merely offer that as a suggestion.

Mr. REICHMANN. Mr. Chairman, I move that the suggestion be referred to the executive committee, and that the committee be given power to act on it.

Mr. HAZEN. I make that as a motion, then.

Mr. REICHMANN. I second that motion.

Mr. GOODWIN. Do you mean that the vital questions that we are to discuss shall be prescribed beforehand, so that we may write briefs on them?

Mr. HAZEN. Have the program, as far as possible, laid out beforehand and sent to the respective delegates, with the request that they prepare briefs, preferably written briefs, to be presented as their reports. I think it could be done in half the time that it takes at present and much more intelligently.

The question was put and the motion carried.

Mr. SMITH. Mr. Chairman, I have a resolution which I would like to offer at this time. It is right in line with some of the recent statements that have been made.

Whereas the investigation now being made by the Bureau of Standards as to the conditions regulating trade weights and measures throughout the country has been of great assistance to the State and local sealers; and

Whereas the all-important question of the cost of living is one that is vitally involved in the question of correct weights and measures;

Therefore be it resolved, That it is the sense of this conference that the appropriation made at the last session of Congress for the purpose of investigating the condition of weights and measures throughout the country be continued.

It seems to me, now that we are discussing this matter, that it is the proper time to bring up this resolution for the continuance of your policy; and it seems to me that the unanimous request of this convention might have considerable weight in inducing Congress to carry out this program. I am very much in hopes that you will feel that this is the proper time to act on this, and that the action taken will be favorable.

Mr. REICHMANN. Mr. Chairman, I would like to speak in regard to that resolution. I would like to offer the suggestion that the resolution be handed in now, but that Director Stratton be given an opportunity to look over it carefully, and that we vote on it to-morrow morning, so that if it be necessary for him to change the wording of it so as to appeal to the individual members of the committee he may make such alterations. The director will undoubtedly have some suggestions to make that will make it even stronger.

The CHAIRMAN. I have looked over the resolution, and I do not believe I could improve upon the wording. I think it is entirely proper. It would be in order for two or three of you, those who are interested, to see the chairman of the Appropriations Committee and tell him your views in regard to this.

Mr. REICHMANN. Who is the chairman?

The CHAIRMAN. Mr. Tawney, of Minnesota. I have never encouraged anything of this sort, and if you go I want you to go of your own accord. I would not have him think for a moment that I am organizing a lobby, because the bureau has no better friend than Mr. Tawney. I do not think, however, that he would resent your

stating that you are interested in the work that has been done and would like to see it continued.

Upon motion the resolution was unanimously adopted.

Mr. REICHMANN. Mr. Chairman, I now move that the secretary appoint a committee of three to wait upon the proper authorities in Congress to-morrow and present the matter to them.

The motion was seconded and unanimously carried.

The CHAIRMAN. That completes the business that we were to take up to-night. Is there anything further?

The SECRETARY. Just one other thing. This telegram was received some time during the afternoon, and in view of the efforts made by the gentleman who sent it to be present, I think it ought to be read here. It is dated Chicago, February 25, 1910, and reads as follows:

Presiding Officer, Annual Conference on Weights and Measures:

Just got here. Storms and delays en route prevent my reaching you in time to participate in your work. Deserve to be recorded present for my effort.

JAMES H. WALLIS,
Delegate from Idaho.

Mr. HASKELL. Mr. Chairman, just one word in regard to this committee that is to call on the Appropriations Committee. You, in my judgment, expressed an idea that is very important; that this is a conference matter and does not in any way come from the Bureau of Standards, or from the director especially. The committee should be composed of men from Idaho or Minnesota, or some of the States in the distance, and it should be made clear that they represent the conference, and not in any way bring the officials of the bureau into it.

Mr. NEALE. Mr. Chairman, I would state to the secretary that Mr. Quist, from Minnesota, is well acquainted with Senator Knute Nelson and Mr. Tawney, and would make a very good member of the committee. I simply offer that suggestion to the association.

The SECRETARY. Mr. Chairman, I am ready to appoint that committee. I will appoint Mr. Quist, of Minnesota; Mr. Hazen, of Vermont; and Mr. Kjellander, of Illinois.

The CHAIRMAN. I want to caution this committee to make it perfectly plain to those gentlemen that you are not being sent there by the Bureau of Standards, but by this conference.

Mr. THOMAS. Mr. Chairman, I would like to ask when the Appropriations Committee will report.

The CHAIRMAN. That is a little uncertain. It will probably report in a few days.

Mr. THOMAS. My purpose is this: I think it will be wise for us, representing our States, to write to each member of the congressional delegation from each State in support of this proposition, so that our support may be indicated, not only to the Appropriations Committee, but to the body of the House and to the Senate; and I shall

take pleasure in letting the entire Ohio delegation know that that thing is desirable for Ohio.

Mr. REICHMANN. I do not know how that works in Congress here; but I know that with the State legislature a number of letters of that kind immediately creates a spirit of antagonism in some person who might otherwise simply pass the matter over. It immediately gives him an idea that there is an organized effort on the part of some one; and I think it is a great deal more effective to sit quietly in the committee room with the chairman of the committee and talk to him.

The CHAIRMAN. My experience has been, Mr. Reichmann, that you are exactly right. There is this to be said, that no Representative ever resents a suggestion from one of his constituents, and it is perfectly proper to write to your own Congressman; but the moment it goes outside of that, they at once compare notes and say that it is an organized effort.

Mr. THOMAS. Mr. Chairman, I quite agree, in general, with the remarks just made. At the same time, where one writes as a private individual the case is quite different from the case we have before us now. We who are State sealers are made so under State law, and we represent, not our congressional district or our senatorial district, but we represent our whole State; and for that reason I felt inclined to let the entire Ohio delegation know how the situation affects me, as the man in charge, by State enactment, of the interests of the weights and measures of the State of Ohio. It is an entirely different case from the ordinary private individual writing a letter to the Congressman of a State. If I were to write in that capacity I never should think of writing to anybody but the Congressman from my own district; but it was because of the other view of the case that I made that suggestion.

The CHAIRMAN. Yes; I see that distinction.

Mr. REICHMANN. Mr. Chairman, I move we adjourn until tomorrow morning at 9 o'clock, at the bureau.

The motion was duly seconded and carried; and accordingly, at 10.30 p. m., the conference adjourned until Saturday, February 26, 1910, at 9 o'clock a. m.

FOURTH SESSION (MORNING OF SATURDAY, FEBRUARY 26, 1910).

The conference reassembled at 9.30 a. m.

The CHAIRMAN. We have before us what promises to be one of the most interesting papers we have ever had. As I said last night, we hope next year to have a more definite program laid out beforehand. I wish that every mayor and governor in the country could be here and see this exhibition. I have sent word for all of the members of our weights and measures division of the bureau to see it, but they are more or less familiar with faulty apparatus. The pity is that only a few of us who are in sympathy with this work can be here to take advantage of it. I will introduce Dr. Reichmann, who will talk to us about false weights and measures, numerous examples of which he has gathered and brought here for your inspection. I shall ask him to take all the time he wants.

Mr. REICHMANN. Mr. Chairman and members of the conference, I will be very brief and probably will not talk over 15 or 20 minutes. I started out with the idea that if the Government establishes standards of weights and measures it is equally important that the Government should maintain the uniformity and honesty of those standards; that the underlying idea of having standards was to secure honest weight and measure, not only in the apparatus, but in the commodity delivered. And I believe that one of the fundamental difficulties is that so many of our courts and so many of our lawyers and so many of our people in general have misinterpreted two very important words. They use them synonymously and confuse them. I refer to "liberty" and "license." Now, we all know that liberty means freedom under certain restraint, restraining one person from injuring another; and only when those restraints become excessive do we have a case of tyranny. But license means absolute lawlessness, and in the matter of weights and measures in this country we have license and lawlessness; and I think it is high time that we do not extend an invitation to everyone to give short weight and measure who wishes to do so. Very few States have taken up this matter, and in those States where it is to be taken up, these delegates are not going to convince their legislators, their governors, or their people of the necessity of having regulation of weights and measures in a year. They are not going to do it in two years. It is a long, slow process, and you have first of all to get public sentiment.

Most people have an idea that they have some visual concept of quantity; that they can look at a basket or a bottle or a measure and see what that basket, bottle, or measure holds. As a matter of fact, they have not. Furthermore, most people have very short memories; and the first essential thing to do is to arouse public sentiment. One of the simplest ways to do this is to get out on the engine with the engineer. Don't ride on a freight train all the time. Don't always ride in the caboose. Most people in public life, in public offices, like to ride in the caboose on a freight train, for the very simple reason that the caboose is the place where they can sleep. But let some of us get out and ride in the cab with the engineer, as Mr. Kjellander has done. And I want to say that one of the few ways to arouse public sentiment is to get the newspapers interested in the subject. It is a very simple matter if we go about it in the right way; because it is the one subject in which you can absolutely never make a tactical blunder. It is the only subject in which every man, just as soon as you ask him, "Are you in favor of honest and uniform weights and measures?" invariably says, "Yes." Then, if you present that to the newspaper in the form of square dealing, and tie up the widows and orphans to it, every newspaper will be glad to take it up. I have yet to see the newspaper man who is not willing to take the matter up and who will not give the person who agitates it every opportunity. Every once in awhile, to be sure, some one or other will make some little blunder; but let that go. All of us are liable to make mistakes, and if a newspaper does happen to knock you, let it go at that. But do not write that newspaper a letter and get into a newspaper discussion. I see there is a newspaper reporter here, and he will substantiate the statement that what a newspaper would like best of all is to have a newspaper discussion. But do not do that. One newspaper can reach a hundred thousand people where you can reach only one, and if you do not have the confidence of the newspapers you may just as well go out of business. As I tell the Associated Press men up there in Albany, "If you fellows want to get my scalp simply say so and I will step down and out," because that is the end of it.

In a report I made two years ago I arbitrarily classified human beings into those who were inherently dishonest, those who had acquired dishonesty, and those who were honest. The percentage of people who are inherently dishonest is very small. The percentage of people who, without regulations, have acquired dishonesty through the stress of competition, is very large. But if there were proper inspection or proper restraint, this class would be perfectly honest and straight.

Now, the first function of every form of inspection is to protect those who have acquired dishonesty and show them the right path,

and then get after those people who are "crooked"—who are inherently dishonest. They are the ones for whom we build prisons; they are the fellows for whom we are maintaining an enormous police force in every city and every State. Aside from that, the mere presence of an official inspector deters a great many from giving short weight and measure, even though often no inspection may be made. Three-fourths of the strength of the police department in a city lies not in the arrests or convictions it makes, but in its mere presence and the fear that it may make arrests; and I think that is the principle on which every successful weights and measures inspection is based.

I personally am thoroughly opposed to a fee system in any manner, shape, or form. If a weights and measures inspection is a protection to the legitimate dealer, as I maintain it is, and we have proven in every case that the legitimate dealers are all in favor of it—it is no more than right that they should have that protection out of the general tax budget; and every dealer is against this special form of taxation called fees. Furthermore, every inspector should have sufficient territory and sufficient work to do to make that work his primary interest. Giving an inspector of weights and measures two or three minor offices, or giving him a position where he will only have to inspect 8 or 10 stores, is absolutely ridiculous, because he can not acquire sufficient interest in the subject. Give him sufficient territory to keep him busy.

But with all that, there is one more very essential requirement, and that is, that every officer of every kind should be compelled to make a sworn report to the appointing power so that the people can know what he is doing. Now, making a sworn report is like signing a death warrant—you are going to be very careful what you are putting in it, and the people will very soon know what you are doing. As a rough estimate, I will say that 95 per cent of all sealers of weights and measures never make a report of any kind. That is absolutely wrong. The question of a State department of weights and measures is important and highly important. It has been brought out here repeatedly that there should be a separate department of weights and measures; that it should not be coupled with any other office. If you have a State department of weights and measures it is necessary to have some sort of system of administration, and it is largely only a problem of administration to secure the best results. If you have two, four, six, or a dozen inspectors, and you have no report from those inspectors, and no system of finding out whether those inspectors have actually done their work, you have signally failed in administering that office, and it will soon degenerate to what it is in a great many places, simply a sinecure. It will simply degenerate into an office having a small salary, and the holder paid that salary to see that no one runs away with the standards.

The idea is entertained by some that we have some efficient laws in relation to weights and measures in New York State. I wish to emphasize the fact (though it has been brought out here) that we have absolutely none. Our laws are all about 75 years old.

In New York State we now have six inspectors and every inspector is required to make a daily report. Those inspectors always work in pairs. They go to different parts of the State and go there unexpectedly. No one knows when they are coming or when they are going out. But we always work with the sealers. A State office should work with the sealer, and get the cooperation of all the sealers of the State. You have to use exactly the opposite method from that which a Federal Government department would use in sending out inspectors to get evidence as to what the conditions are. I think the inspectors who have gone out from this bureau have pursued exactly the right policy to get at the evidence, but as an administrative question you have to work with the sealer in a State, which is altogether a different problem. I think that in a number of places great mistakes have been made. Some of them are trying to use their detective functions to find out whether a local man is doing his work or not. I think that is absolutely wrong. Assume every one of your officials to be a gentleman until he is proven to be otherwise, because that is the only way you can get the cooperation of the sealers, and you absolutely need that in order to have uniformity.

Furthermore, by shifting your inspectors you can easily tell by comparing reports whether they have actually done their work. Of course, making a daily report is a simple matter if you word it so that the man fills in numbers and that sort of thing. He can go home at the end of a week and fill in a lot of reports. In short, you have to be always looking for results, and the only way to do that is to have a sufficient number of inspectors so that you can shift the inspectors and compare the notes of one set with those of another.

The State department in order to produce uniformity should issue specifications of the kind of apparatus to be used. It should issue lists of apparatus needed in a local office. It should work with the city or with the county to try to get them something that they can use easily and efficiently, and if possible save that community money. As an illustration, we have a number of counties where they have some standards that have been used for years. Some of those standards are in very poor condition. We could easily condemn the whole lot, and they would then have to go to the expense of getting an entirely new outfit. Very often a number of pieces, such as dry measures and liquid measures, can be easily repaired. In those cases we always make a recommendation like this: "Do not spend \$75 or \$100 for a new set; but spend \$10 or \$15 to have these repaired, and we will adjust them for you." In other words, you have to show the

various municipalities and counties that you are trying to help them, and that it is to their interest. It is a very simple matter, you know, to make out a list of apparatus and simply swing the "big stick" and say, "You have to do this." But then you do not get that cooperation.

Yesterday Mr. Palmer spoke of a system of warnings that they had just adopted. We have been using that system for the last three years, and it is of more benefit than almost anything we have used. I primarily started out to use such warnings, because I have to show knowledge on the part of the dealer. By giving a man a written warning, either in person or by sending it to him by registered mail, marking the letter "personal" on both front and back, we have evidence that he had knowledge that some particular piece of apparatus was wrong, or that some clerk was putting up short packages. But the person who is inherently honest will in every case observe a warning of that kind, and we have very little trouble about that. The great difficulty is, as I said before, to weed out those who are actually the guilty parties.

I have brought with me a few samples of typical kinds of measures that can be picked up. Some of these perhaps are different from those in your territory, and perhaps have greater shortages than some you would find in your sections; but I dare say that in every city where there is not an efficient inspection of weights and measures, you can find apparatus like this if you know how to look for it. What I mean by knowing how to look for it is, that when you look at a measure, do not stand half a block away (with some of these you can tell they are short half a block away), but look at all sides of it and particularly the inside of it, the side that the people never see. I will not discuss these measures; they speak for themselves. I will only state that if you get a collection of measures of that kind they tell more than two hours of talk will tell. They are more convincing. I used measures of that kind at the State fair in Syracuse. The attendance at these fairs on the governor's day is generally in the neighborhood of 250,000 people. We had a large booth, and I lined the back of it with faulty measures and weights of this kind. In my report I have a picture of the exhibit. The people stood 10 deep in front of the booth, very much interested in these concrete examples of short coal bags and every conceivable kind of short weight packages and faulty instruments. About every 15 minutes we had to clear out the crowd to allow another crowd to come in.

The SECRETARY. Dr. Reichmann, I would suggest that you show how these measures are short—I mean just a few of them. I think they are rather startling.

Mr. REICHMANN. Well, I will take up a few of them and show how they are used. I brought with me copies of instructions to sealers, copies of our laws, copies of my last report, and copies of one of my talks. I have about 10 such talks and this one that I brought with me gives an outline of what I consider the weights and measures problem. Then I have a little pamphlet entitled "Hints to Housekeepers." I got out 5,000 of those for the fair, and they were all gone by Wednesday, with the three largest days still to come. We have had to print, I think, 6,000 of those since that time, which shows you how much interest the mere seeing of the concrete examples excited. People write for them, and sometimes want a dozen or two dozen, some of them as high as 50 copies. That shows what we are doing in the way of arousing public sentiment.

[At this point Dr. Reichmann exhibited a large number of faulty types of weighing and measuring apparatus, and also many pieces of apparatus which had been intentionally made incorrect by the merchants who had been using them to defraud their customers by giving less than the quantity represented by them. This exhibit has been collected by the New York State department of weights and measures in all parts of the State.]

Among the apparatus I have here are scales of the even-arm type, which delivers amounts according to the weight on the platform. Cheap scales of this class are, in nearly every case, deliberately used to defraud the customer. Other scales of the spring type have adjusting screws which can be very quickly manipulated by the dealer so as to deliver less than the indicated amount. Other spring scales have sliding faces which accomplish the same result.

Many ingenious frauds in dry measures are found. Some dry measures are constructed with false bottoms which reduce their apparent capacity from 50 to 75 per cent. Others are reduced in diameter by relapping; and measures which have been reduced in height, and measures with false sides are also here. This is a liquid measure which has been reduced in capacity by a heavy coating of paraffin in the bottom, while deep dents and displaced bottoms accomplish the same results in others.

Weights are made short by various amounts by removing the lead fillings, by sawing off part of the bottom, by drilling, and in other ways. In one case cans of various sizes partially filled with lead and sand were found in commercial use as weights by the New York State department of weights and measures.

Reductions in the size of package goods are shown by two packages of a well-known cereal. The package upon sale to-day can be placed inside the former package, although the changes in dimensions would hardly be detected by the ordinary purchaser. Both packages retail at the same price.

There is one other matter to which I wish to refer. I have three bills in the legislature, one of which, a net content of container bill, I do not believe will receive a hearing. If it does I shall go to Albany with some 75 others and oppose the bill. There will be nobody to appear in favor of it. I shall oppose it on the ground that similar legislation will be considered by Congress, and that it ought to come through Federal legislation.

Mr. KJELLANDER. I beg your pardon; what did you say you were going to oppose?

Mr. REICHMANN. The net content of container bill. You call it a net-weight bill, but I do not call it that because I think that is a misnomer.

Mr. KJELLANDER. Why are you going to oppose it?

Mr. REICHMANN. Because I think that ought to come through national legislation, in the first place, and we ought to use our efforts to get it through here.

Mr. KJELLANDER. That is true, but I do not think I should oppose it, just the same.

Mr. REICHMANN. There are other features in that bill of which you do not know.

Mr. KJELLANDER. If it is a good net-weight bill, I would never oppose it in my State, for the reason that I am in favor of anything that benefits the public in my State or in any other State.

Mr. REICHMANN. Certainly; but the question is, How are you going to get such legislation?

I have an outline here of the law at present in New York, and what we wish to accomplish with our bills. I put these side by side, because so many people were asking me about these bills, and I could not use the time of a stenographer to answer their letters. In that respect we have modeled the office of weights and measures after the other State departments in Albany. Every department is efficient, and it is always a question of dollars and cents. If it is cheaper to have a letter of that kind printed, where we have a number of inquiries, than it would be to hire a stenographer, we use that method in every case. In other words, none of our State offices create unnecessary positions, and that is a very desirable condition of affairs.

Mr. KJELLANDER. I would like to say a word in regard to the investigation now being carried on by the Bureau of Standards. In the first place, I believe that the bureau ought to ascertain the true conditions in every city visited, and then afterwards show the city sealer whether he is right or wrong, and then cooperate with him and show him how he can be benefited by the instructions of the Bureau of Standards. I believe that every city sealer ought to welcome any investigation of that kind and stand or fall upon his record. And I think, as I said yesterday, that the Bureau of Standards ought

to be and must be the fountainhead of weights and measures and the fountainhead of our laws governing original packages.

Now, as to the original-package question: The retail grocers throughout the country are interested in this matter of a net-weight-package bill, and I have in my hand a speech that the chairman of the National Butchers and Grocers' Association made in Cairo, Ill., a few days ago. Speaking of the cost of living, he said that there is no question in his mind but what the increased cost of living is due to the condition of the original packages. I will just read a few lines of his speech:

I further believe that the present tendency of manufacturers to market their products, whenever possible, in containers at an exorbitant price is one of the causes of higher prices in foods and foodstuffs. These goods are exploited in a great many publications, and the consumer is invited, through various reasons, to purchase these articles in original packages, regardless of the quantity contained therein. I am fully convinced that the consumer will, by buying goods in bulk, save in many instances as high as 40 per cent on his purchases.

These facts bring strongly to my mind the great effort put forth to divert this class of business to the package proposition; and I want to assure you that the reason for so doing is not for the benefit of you as retailers nor any deep concern for the consumer's welfare, but that they, the manufacturers, may have absolute control of the situation in this country and be in a position, after gaining, if possible, the confidence of the public, to have these packages get smaller and smaller every day.

In speaking of the package proposition I want to call your attention to the fact that the great amount of money spent in advertising is deducted from your profits—from the retailers' profits. You pay the advertising bill, and the consumer pays the dividends. The policy of placing a price anywhere from 95 cents to a dollar per dozen on an advertised 10-cent article is not giving the retailer a square deal. The profit is too small. In many instances the question of profit is a question of location.

As I said yesterday, this is one of the main things that we have to work for, and every one of us here to-day ought to try to help the Bureau of Standards to pass this original-package bill, even though the bill is not just as we would like to see it because of the word "approximate" in it, which practically means nothing. You delegates ought to take it up, everyone of you, before you leave this city; and if you can not see your Congressman before you leave, you ought to write to him and try to get all the influence possible to bear to get this bill through Congress. Because if we once get this bill through, even though it is not exactly what we want, we can probably amend it. The main thing is to get a start. If your Congressman says to you, "I am not for this bill"; and if you have not enough influence with him to impress upon his mind that this is for the public benefit, arouse some interest in your particular neighborhood; show the people that this is a just cause, and that your Congressman ought to work for it. In other words, educate the people; arouse them so that they will tell their Congressman, "You must vote for that bill; it is to

the interest of us consumers." It has been said that the manufacturers of original-package goods have the strongest organization in the world; that they have the capital behind them. It may be true, but capital is nothing, gentlemen, if you can arouse public sentiment. Capital can not stand against public sentiment. Therefore I say to you that it is up to you to go into your States and into your immediate neighborhoods and get the people aroused.

I am surprised that the public press of this city—not criticizing the press of this city at all—had not any more to say in regard to our convention than appeared last night. The newspapers ought to be aroused. They ought to be talked to and made to see that this is for the benefit of the public; that this is probably the beginning of one of the greatest undertakings in this country. And I think that the great part of the press is with us, or will be with us, on this proposition before we get through. The press of the city of Chicago has stood nobly by me in my undertakings. The men of the press are fair-minded, and if the matter is put to them in the right manner they will go ahead and do what is right and show the consumers that they must rise in their might and crush these trusts or monopolies that are combining to-day on practically all of our package goods.

I have in my possession letters showing where combinations have practically fixed the prices of these package goods in various lines. That is the reason, more than anything else, in my opinion, for the higher cost of living to-day, and it behooves every one of us, whether we are State sealers, whether we are city sealers, or whatever we are, to go to the public press and ask them for support. And if you ask the public press of this country in the right manner, they are going to give you that support. I thank you.

The CHAIRMAN. Gentlemen, the next item on our program is a discussion of the two bills pending. First, as to the original-package bill, I think that Mr. Kjellander has said all that any of us could say on that subject, and he has hit the nail exactly on the head, namely, that each of you should get out and work for it. The question of the word "approximate" does not trouble us at all. I am sure we can agree on that. A great many people take the stand that the Bureau of Standards ought to be in a way judicial, not active and legislative. We are not going to take that stand for a minute. There is not a man in the bureau who believes that he should not be active in pushing proper legislation. This package matter is pending and it only needs you to get behind it and push it through. The bureau will do everything it possibly can. There is very little objection to it on the part of the legislators, but you know where the objection will come from.

I want to say that I attended a meeting before a Senate committee the other day in regard to paints, and I think there were at that

meeting 50 or 60 representatives of the leading paint men. They said, to a man, that they would stand right behind any bill that contemplated the requirement of full net weight in packages. That is one very large interest in this country that has promised its support, and I have no doubt there are a great many others.

The other matter pending is a bill which we were asked to introduce regarding the manufacture of false weights and measures, making it a penal offense to manufacture or put on the market such measures as these I have before me. I am not going into detail, because that is the sum and substance of the bill. The bureau will take that up and push it. The chairman of the Committee on Weights and Measures has agreed to introduce the bill, and there will be no difficulty.

The other bill that we had drawn up was in regard to a model State law; but there are so many things in it that were found to be defective, in the light of our experience now, that the executive committee has decided not to push that in its present form, and I agree with them. I think that if we take these other two bills and push them through, we will have our hands full, and that we ought to have another year to consider that national law. However, if it is your idea for us to try something new, we will do it. It is entirely in your hands.

I want to state that it is entirely in order for you to offer any criticisms on either of these bills we are now to consider. If you do not like the word "approximate," say so. Do not think for a moment that we object to criticism.

Mr. THOMAS. Mr. Chairman, there are two things that to my mind are serious objections to this bill, and another that is not quite so serious, but which I would rather not see in it. Personally, so far as the State of Ohio is concerned, I would much rather a bill like this should not go through Congress. I would rather they would let Ohio work on the plain, simple proposition of requiring the stating on any package or container of the net weight of contents of that container, leaving out the word "approximate" and leaving out the words "numerical count." Those two things are, to my mind, serious objections to the bill. On the other hand, I do not believe, as I have stated before, in this question of tolerances, for the only change that I can conceive of at present as taking place in a package of foodstuffs is that of the loss of water by evaporation, and I have contended here before that a man has no business to attempt to sell water to his customer. The customer wants food, and he is entitled to get full weight and measures in the form of food when he buys it. Therefore I am against the bill on that account. I would rather we should have a chance in Ohio to work out this proposition ourselves, uninfluenced by previous action on the part of Congress such as this. I

think that Congress, if it passes a bill of this kind, ought to put a straight, simple requirement that the net weight of contents of the container shall be stated in plain print on the container; that is, the net weight or measure, not "count." And furthermore, the words "approximate" and "tolerance" should not appear. I say this for the reason that we have already in Ohio a law (sec. 7072 of our Revised Statutes) which requires that all manufacturers putting up goods usually sold by weight in packages shall put on the container the gross, tare, and net weight of contents, under penalty of a maximum fine of \$500 or imprisonment for six months, or both, for failure to so mark the goods. We have gotten that far; now, let us see if we can not go further.

Mr. REICHMANN. Has any attempt been made to enforce it?

Mr. THOMAS. No; but we have a staff there, and what we want now is a provision to enforce what we already have.

Mr. YODER. Mr. Chairman, I agree absolutely with Mr. Thomas. I do not think that bill is worth anything, because we already have approximations and tolerances. Who is going to enforce them afterwards?

Mr. REICHMANN. Mr. Chairman, I move that the chair appoint a committee of three to consider this proposition. A number of these gentlemen have not been up against this proposition of having a net-weight-of-container bill, and they do not know what arguments are going to be used. I fully believe that Congressman Mann had some good reason for insisting on that language, and let us find out that reason the first thing. If you do not put the words "numerical count" in the bill, you will never get it through.

The CHAIRMAN. Do you mean simply to consider this and report?

Mr. REICHMANN. Yes, sir; with power to act.

The CHAIRMAN. I would like very much to have four or five of you gentlemen who know exactly the conditions come face to face with the opposition. That is what is needed. Now, you can consider this if you like, and let it go over till next year; but when the other side, which is thoroughly organized, brings this bill before Congress, which they will, they will be there in force (the paint makers had 50 or 60 people there), and it will be necessary to have five or six people there to meet them. We will have to have the men there who can answer the questions of the chairman of the committee right on the spot. I will arrange for the hearing. We can have it at any time.

Mr. REICHMANN. And they will have to be of one opinion. If those five or six men can all agree on the bill, it will go through; but one little hint of disagreement will kill the whole proposition.

The CHAIRMAN. In order to have a proper geographical distribution, you ought to have at least five on that committee.

The SECRETARY. Mr. Chairman, I certainly hope that this bill or some similar bill will be introduced right now. We do not want to wait another year before anything is done.

Mr. KJELLANDER. I think that Dr. Reichmann has stated the position in a very good way; that the committee to be appointed meet and carefully consider the bill and come to some agreement, and then go before the congressional committee as a unit.

The CHAIRMAN. When the paint makers appeared before the Senate committee the other day, the chairman of the committee said, "Gentlemen, who represents you?" They said that Mr. So-and-So represented them, and he presented a very carefully prepared argument. Their whole procedure was organized. I got a lesson there that I never had before. Are there any further comments?

Mr. KJELLANDER. I move to amend the motion to have a committee of five instead of three.

The motion was duly seconded and carried.

Mr. REICHMANN. I move that this conference adopt the following resolution:

That the National Conference on Weights and Measures is thoroughly in favor of a net content of container or a net-weight bill being passed by Congress, and the sooner the better.

Mr. KJELLANDER. I second the motion.

The question was taken and the resolution adopted.

Mr. PALMER. Mr. Chairman, the committee on constitution and by-laws had a meeting last evening, and we considered it inadvisable at this time to draw up any more by-laws than we have; and we suggest that the matter be referred to the executive committee, or some other committee, to report at the next meeting.

Mr. REICHMANN. I move that we accept the report.

The motion was seconded and carried.

The CHAIRMAN. Prof. Thomas has a report from the committee on resolutions.

The secretary read the report referred to, which is as follows:

WASHINGTON, D. C., February 26, 1910.

The National Conference on Weights and Measures, assembled in its fifth annual session, expresses and records its great regret at the loss it has suffered in the death of one of its members, Capt. George H. Pettis, of Rhode Island. His presence and activity in former sessions added greatly to the interest and inspiration of the sessions. We esteemed him as a man and friend, and admired his zeal and fearlessness in the discharge of his official duties.

We extend our heartiest sympathy to those he has left behind.

(Signed) W. C. HASKELL.

(Signed) WM. F. GOODWIN.

(Signed) B. F. THOMAS.

Mr. PALMER. I move the adoption of these resolutions.

The motion was seconded and unanimously carried.

The CHAIRMAN. We will now proceed to the election of officers.

The SECRETARY. The officers to be elected are the president, vice president, secretary, and four members of the executive committee.

The CHAIRMAN. Nominations for president are in order.

Mr. PALMER. I move that the secretary be instructed to cast a ballot for the present chairman.

The motion was seconded and unanimously carried.

The CHAIRMAN. Gentlemen, I am highly honored by your action. I will do the best I can; but I hope the time will soon come when you will take this thing into your own hands; and I am willing at any time to surrender to your choice.

Mr. HASKELL. Mr. President, I move that the election of our present secretary be made unanimous.

The SECRETARY. Mr. Chairman, before that motion is put I would suggest that the vice president be first elected.

Mr. HASKELL. I will include the vice president and the secretary in the same motion.

The motion was seconded and unanimously carried.

The CHAIRMAN. I believe the present members of the executive committee are Prof. Thomas, Dr. Reichmann, Mr. Pettis, and Mr. Haskell.

Mr. REICHMANN. Mr. Chairman, I would like to be excused from serving on the executive committee.

The SECRETARY. I hope Dr. Reichmann's request will not be listened to.

The CHAIRMAN. We all hope that; but he may have some good reason for his request.

Mr. REICHMANN. I have a perfectly good reason, which I do not care to state here; and I hope that my request will be granted, because otherwise I should have to refuse to serve, and I do not approve of a person's refusing to accept a place when it is offered him.

Mr. PALMER. Mr. Chairman, I nominate Mr. Kjellander, of Chicago.

Mr. REICHMANN. I nominate Prof. Thomas, Mr. Haskell, and Mr. Quist.

Mr. PALMER. Mr. Chairman, I move that the secretary be instructed to cast a ballot for these four nominees.

Mr. REICHMANN. I second the motion.

The question was taken and the motion was carried.

The SECRETARY. The secretary takes great pleasure in announcing the unanimous election of Messrs. Thomas, Haskell, Quist, and Kjellander.

The CHAIRMAN. Gentlemen, this completes our list of officers. Is there any new business?

I hope that the new members will take a few minutes to see at least the weights and measures department of the bureau. This afternoon the bureau will be open, and we shall be glad to have any of you return this afternoon if you have time.

Mr. PALMER. Mr. Chairman, I would like to bring up the question of an investigation of weights and measures on packages. I believe it has been taken up in Ohio quite successfully. Massachusetts is about to take it up, I understand, but I question whether any State investigation will accomplish the desired end. I think that Congress should do something about it, and since the chairman of the committee is a Senator from Massachusetts, it occurs to me that here is a very good opportunity to bring the matter to the attention of the committee, especially since it was referred to very distinctly by Secretary Nagel yesterday at this meeting, which gives the matter additional importance. Without making any motion, it seems to me that this convention ought to be recorded as in favor of an investigation as to the weights and measures on packages of foodstuffs, etc., inasmuch as it effects the high cost of living; and I would like to see the association take some action in the matter. I think, as a matter of fact, that the Bureau of Standards should be called upon by the Senate committee to make investigations along these lines. The head of the bureau probably would not take it up unless he were asked to do it; but I believe that if that could be brought to the attention of the committee by resolution or something of that kind, the committee itself would be only too glad to avail itself of the privilege of having the bureau conduct such an investigation; and I believe the results would be astounding to the public.

Mr. REICHMANN. Mr. Chairman, I am opposed to such a resolution. I think that the director, knowing the sense of this convention, would naturally call that to the attention of the committee, and that a request to pass such a resolution might imply that we do not trust his intelligence, and that we have to call his attention to that fact. I maintain that if they investigate anything, they will have to take that matter into consideration. As a matter of fact, that is the only thing that has increased the cost of living that they can remedy. The other causes are beyond their control.

The CHAIRMAN. Mr. Reichmann, may I make a suggestion?

Mr. REICHMANN. Certainly.

The CHAIRMAN. It seems to me it would be entirely in order for you to put your resolution in a little different form; for instance, that you believe that the use of false weights and measures is responsible to a large extent for the high cost of living. We will then present that to the committee, and it will open the whole subject.

Mr. REICHMANN. That it is the sense of this meeting that that is one factor?

The CHAIRMAN. Yes; that you believe that it is an important factor.

Mr. REICHMANN. Yes; but we do not want to suggest to them to take up the whole net-weight-package subject.

The CHAIRMAN. No; that would answer their purpose. I think that is one of the most valuable suggestions that has come out of this meeting. There are two committees now in Congress considering this matter, Senator Lodge's committee and another one, and I think it is only necessary to call their attention to it.

Mr. PALMER. That is what I wish to accomplish, Mr. Chairman.

Mr. THOMAS. Mr. Chairman, I move that it is the sense of this conference that the question of honest weights and measures is most intimately associated with the high cost of living now under investigation in State legislatures.

The question was taken, and the motion was carried.

The CHAIRMAN. I will appoint as this legislative committee—that is not a good name, but we will understand it—Mr. Kjellander, of Chicago; Mr. Quist, of Minnesota; Mr. Palmer, of Massachusetts; Dr. Reichmann, of New York; and Mr. Yoder, of Montana.

Mr. REICHMANN. Mr. Chairman, I would like to be taken off that committee. It will be impossible for me to serve.

Mr. KJELLANDER. I do not believe, Mr. Chairman, that it is fair that Dr. Reichmann should withdraw from that committee. I think he is heartily in favor of the proposition. He has probably investigated those conditions more closely than most of us here, and I think it is a duty which he owes to this association and to the public to serve on this committee.

Mr. REICHMANN. Mr. Chairman, I deeply feel my responsibility to the State and to this conference, but there are reasons why it would be impossible for me to serve, and I do not like to get up here and state that I refuse to serve. So I hope the chair will grant my request.

The CHAIRMAN. Let me make this suggestion, Dr. Reichmann: In case there is a hearing and this committee desires you to go before the congressional committee, are you willing to do that?

Mr. REICHMANN. If "approximately" possible, I will.

The CHAIRMAN. I think it would be too bad for them not to have the advantage of your experience. So, with that understanding, I think perhaps we had better put some one else on the committee in Dr. Reichmann's place.

Mr. KJELLANDER. I do not think so. I think he ought to be on the committee.

The CHAIRMAN. Well, we will let it stand for the present, and if necessary we can change it afterwards.

That finishes the regular business.

Mr. REICHMANN. Mr. Chairman, I wish to offer the following resolution:

Resolved, That a special vote of thanks be extended to the Bureau of Standards for their entertainment of this convention, and for the many courtesies extended to the delegates.

The motion was seconded and unanimously carried.

Mr. REICHMANN. Mr. Chairman, I would like to offer another resolution:

Whereas our stenographer, Mr. Caswell, of the staff of the Bureau of Corporations, has so diligently worked for our benefit;

Therefore be it resolved, That a special vote of thanks be extended, and is hereby extended to him.

The motion was seconded and carried.

Mr. REICHMANN. Mr. Chairman, I move to adjourn.

The motion was seconded and carried; and, accordingly, at 11.10 a. m. the conference adjourned.



DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
WASHINGTON - DISTRICT OF COLUMBIA

Weights and Measures

4

FIFTH ANNUAL CONFERENCE
OF THE NATIONAL BUREAU OF STANDARDS
AND THE NATIONAL BUREAU OF WEIGHTS AND MEASURES
HOLDING THEIR ANNUAL MEETING AT THE
WASHINGTON FIELD HOUSE, WASHINGTON, D. C.,
JANUARY 10-12, 1924



1924
BUREAU OF STANDARDS



DEPARTMENT OF COMMERCE AND LABOR
BUREAU OF STANDARDS
S. W. STRATTON  DIRECTOR

Weights and Measures



SIXTH ANNUAL CONFERENCE
OF REPRESENTATIVES FROM VARIOUS STATES
HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C., FEBRUARY 17 AND 18, 1911



WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

OFFICERS AND COMMITTEES.



OFFICERS.

President, Dr. S. W. STRATTON, Director of the Bureau of Standards, Washington, D. C.

Vice president, Mr. D. C. PALMER, Commissioner of Weights and Measures, Boston, Mass.

Secretary, Mr. L. A. FISCHER, Chief of Division of Weights and Measures, Bureau of Standards, Washington, D. C.

COMMITTEES.

Executive committee:

The above-named officers and—

Dr. REICHMANN.

Mr. HENRY.

Mr. HASKELL.

Mr. WALL.

LIST OF DELEGATES WHO ATTENDED THE CONFERENCE.



G. F. AUSTIN, <i>City Sealer,</i> Detroit, Mich.	W. R. JACKSON, <i>State Dairy and Food Commissioner,</i> Lincoln, Nebr.
H. A. BOYER, <i>City Sealer,</i> Harrisburg, Pa.	EDWARD J. MARONEY, <i>City Sealer,</i> New Haven, Conn.
R. W. DUNLAP, <i>State Dairy and Food Commissioner,</i> Columbus, Ohio.	D. C. PALMER, <i>Commissioner of Weights and Measures,</i> Boston, Mass.
L. A. FISCHER, <i>Chief, Division of Weights and Measures, Bureau of Standards,</i> Washington, D. C.	F. REICHMANN, <i>Superintendent of Weights and Measures,</i> Albany, N. Y.
W. F. GOODWIN, <i>State Sealer,</i> Lincoln, R. I.	S. W. STRATTON, <i>Director, Bureau of Standards,</i> Washington, D. C.
W. F. HAND, <i>State Chemist,</i> Agricultural College, Miss.	JOHN H. SULLIVAN, <i>City Sealer,</i> Newark, N. J.
W. C. HASKELL, <i>Superintendent of Weights, Measures, and Markets,</i> Washington, D. C.	B. F. THOMAS, <i>Professor of Physics, Ohio State University,</i> Columbus, Ohio.
HUGH H. HENRY, <i>Commissioner of Weights and Measures,</i> Chester, Vt.	J. S. WALL, <i>Department of Internal Affairs,</i> Harrisburg, Pa.
F. C. JANSSEN, <i>City Sealer,</i> Milwaukee, Wis.	

INTERESTED PERSONS INVITED TO TAKE PART IN THE
CONFERENCE.



W. H. BAHRENBURG,
National League of Commission Mer-
chants,
New York City.

J. C. CONNORS,
Troy, N. Y.

A. T. CUMMINGS,
President Boston Produce and Fruit
Exchange,
Boston, Mass.

J. F. EAST,
Secretary Farmers' Manufacturing Co.,
Norfolk, Va.

A. W. EPRIGHT,
Scale Inspector for Pennsylvania Rail-
road,
Altoona, Pa.

F. S. HOLBROOK,
Inspector of Weights and Measures,
Bureau of Standards,
Washington, D. C.

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Assistant City Attorney,
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M. H. STILLMAN,
Acting Inspector of Weights and Meas-
ures, Bureau of Standards,
Washington, D. C.

N. P. WESCOTT,
Assistant Secretary and Treasurer,
Eastern Shore of Virginia Produce
Exchange.

Onley, Va.

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REPORT OF THE SIXTH ANNUAL CONFERENCE ON WEIGHTS AND MEASURES OF THE UNITED STATES

HELD AT THE BUREAU OF STANDARDS
WASHINGTON, D. C., FEBRUARY 17 AND 18, 1911



FIRST SESSION (MORNING OF FEBRUARY 17, 1911).

The sixth annual conference convened at 10.30 a. m., in the lecture room of the Bureau of Standards, the chairman, Dr. S. W. Stratton, Director of the Bureau of Standards, presiding.

The CHAIRMAN. Gentlemen, it gives me very great pleasure to welcome you, the delegates to this, the sixth convention of State and city officials.

The representation is not as large as we expected, and not as large as we ought to have, but no one knows, perhaps, as well as Mr. Fischer and myself, what the difficulty is in getting representation from the States that have no organization. There is no difficulty after the State has perfected its organization, but to get a new State started, and to get a delegate from a State in which the work has not been put on the proper basis, is a very slow process. Most of the governors respond with a formal letter expressing their hearty sympathy with the work and wishing it success, but stating that they are unable to send a delegate on account of lack of funds, or lack of this or lack of that. Sometimes we get discouraged; sometimes it seems that it is almost impossible to get the State officials together; and yet I am very greatly encouraged at the number that we have this morning.

We had planned to have our Secretary with us. You met Secretary Nagel last year and he gave us a splendid talk. Since that time we have had occasion to go before him with a great many questions pertaining to the bureau's work, and especially weights and measures, and I can assure you that the department has never had a Secretary who has taken as much interest in this particular part of the work as Secretary Nagel. He was unexpectedly called out of town—he will be with us to-morrow morning—but he wished me to say to you that he was heartily in sympathy with this work and that he had done all he could during the past year and intended to assist us in every way possible. It is a pleasure to work with a Sec-

retary who takes such great interest in the affairs of the various bureaus.

We had invited Representative Mann, Representative Wilson, and Senator Page, and one or two others who are interested in weights and measures, to be with us, and they had expected to be here, but I think we have perhaps made a mistake in calling this convention at the end of a short session, especially this short session. The complications are such in Congress that for the past week they have been meeting early in the morning. The legislative situation is rather critical and most of the members can not get away. This morning the House is called to meet at 10 o'clock, and Mr. Mann telephoned that it would be simply impossible for him to get here. They all wished me to express their regrets to the members and say that they were interested in the work and sorry that they could not be with us at this particular meeting. I hope that their absence will not be taken in any way to indicate that they are not heartily in favor of what you are trying to do, and helping all they can.

Now, I am not going to take up much of the time this morning, but there are one or two remarks that I would like to make. We have a number of new delegates here, and I want to say just a word to them. The objects of this association are two—that is, two principal objects. There are many which we can accomplish; there are many good things which the association can do; but the object of the bureau in calling the convention together originally was, first, that it might be an instrument through which the bureau could arouse interest and bring about a better condition as to weights and measures in the various States, especially those States in which comparatively nothing was done. The second object was to make the bureau an efficient clearing house for matters pertaining to weights and measures. The bureau is called upon continually to advise our legislatures—the national legislatures—in regard to bills that are presented. States and cities are calling upon us for model laws and suggestions as to State laws and city ordinances. Now it is exceedingly important that what we give to these organizations shall be the right thing, and we can only know the right thing by keeping in constant touch with those local officials who have to do with the administration of weights and measures.

As to the new members, they can be of the greatest assistance to us in the first object stated, namely, the originating of the weights and measures movement. In making a digest of the laws of the various States in regard to weights and measures, we found that every State had a law and had an official of some sort who was delegated to have at least the custody of the standards, who was designated in some way as a weights and measures official. We found at the first meeting, and we have found since, that many of these offi-

cials, knowing probably that they are not in the strict sense of the word weights and measures officials, have hesitated to attend these meetings. In nearly every case the secretary of state or an auditor or some other State officer was delegated as the weights and measures official of the State, and in that capacity they seem to have been looked upon as merely custodians of the standards. That sort of official has always hesitated to come out and attend these meetings and get up against, as it were, those officials who are actually carrying out weights and measures administration.

Now, this sort of man can in many ways be of better service in this first stage than the technical weights and measures man. The technical weights and measures man is the best, perhaps, to suggest a law and to carry out the administration of that law after it has been formulated. But I sincerely hope that those delegates here who represent the former class, and those who are not here, will not feel that because they are not technical weights and measures people they can not be of great assistance in our work. They can be of the greatest assistance. In fact, the auditor or the clerk of the court, or whoever he may be, is the very best man to go back and say to the governor of his State that they ought to have in that State a proper weights and measures official. If it comes from any other source, as we have found in many cases, there will be jealousy; the incumbent of the office will immediately think that someone wishes to displace him, that they wish to get this out of his hands, and his dignity is offended. So for diplomatic reasons we thought it best to take the situation as we found it and work through that man; and we have found in many cases that they have been of the utmost assistance. Some of the best influence extended to the States has been exerted through these officials, the officials who are not in any sense of the word weights and measures men as we think of them.

So, again, I want to welcome especially the new delegates and those who do not consider themselves weights and measures officials, but have been delegated to attend this meeting for the purpose of finding out what should be done and reporting to their respective States. We hope that your report will be along lines that will stimulate regulation of weights and measures in the various States.

I wish I could report a greater progress in the bureau's work along this line. However, it has been very satisfactory. Sometimes we feel that it is slow, and I have no doubt that you people think that it is slow, but I feel that what has been done has been well done. Our relations with those cities and States with which we have come in contact are exceedingly good, with one or two exceptions, and that in itself is a very important matter. I am pleased to say that so far as the work has been done it has been done harmoniously in the various States. This stimulation has gone on in almost every case

without offense and without any friction whatever. The States and cities, as a rule, feel that we are there not in the sense of inspectors—I speak now as to the original work of getting a State started along these lines—that we are there simply to find out the truth, the conditions, and that we have the means of getting this information that they have not; and we have put that information in their hands in every case, and it has produced the greatest good. It is our intention to continue this work through the coming years and not to treat it as a special thing. I had the greatest difficulty in the first case in securing the appropriation, not because of its amount—it is not a question of the amount of the appropriation at all—but it is this question of how far the National Government should go into the States, and that is a thing that must be handled carefully. I had to handle that. I had to get this first appropriation solely for the purpose of getting information for our own selves. I said that we needed this information as to what the conditions were in the various States, and that I wanted to get it first-hand; that we could not get it from the States in which there were no officials. That was the purpose for which the appropriation was made, and we will have to proceed very carefully indeed in all these matters which pertain to the local administration. Now we have decided to put this on a permanent basis. The employees will be appointed permanently, certain funds will be set aside, and this work of inspection will continue until all of the States have efficient organizations. There is no doubt that in the meantime legislation which is proposed, and which must come about sooner or later, will aid us in extending this contact with the States. I can not say just how it will come about, but it is sure to come sooner or later, and that will all tend toward bringing the local weights and measures officials into closer contact with the National Government.

We are not able to report as much along the lines of legislation as we would like to; that is, as to definite acts. Legislation, as some of you know, is exceedingly slow at the very best. I think it is much slower at the National Capital than at the State capitals. There is always this tendency to let a thing rest and see what is coming of it, see what is behind it, see what there is to it. There has been the greatest inertia at the Capitol in regard to taking up some of these measures which are very dear to us, largely because they felt that it was going too far, as I said before, into the local matters, and largely because of the misrepresentations that have been made by manufacturers and others. That is one of the things that has surprised me very much. I had the pleasure of meeting the coming Speaker the other evening, and he dwelt for a considerable time upon that matter. Mr. Clark has been a member of the Ways and Means Committee, as you know, and has had to do with the revision of the tariff; has been

a Member of the House for 20 years, and a very active Member; and he mentioned a thing which is so apparent to the people who are on the ground, namely, that those who go before the committees exaggerate to such an extent. You would not believe the statements that were made before the House of Representatives when this package law first came before it, when it came up in connection with the original pure-food bill—statements that evaporation could take place in the can, and all sorts of unscientific and untrue things. These things make our legislators suspicious, and the tendency in every case is to be careful, to let the thing settle down and filter out and see what there is to it. Nevertheless the fact that you have been busy in the States and have suggested legislation along these same lines is the very thing that has stirred these people up. Just the other day I was called over to one of the committee rooms to meet with half a dozen of these people in connection with the amendment to the pure-food law which has to do with the net weight on packages—the net-weight law, as we call it. These people, to my great astonishment, were all in favor of such a law—the very people who had fought this before—and I said, “Why have you come around? What has been the cause of this, when you have been fighting it all along?” The answer was immediately from every one of them, “Because the various States have proposed legislation, and if we have got to have it we want one law rather than 47.” Now, that was just the object of this State legislation in many ways. It is exceedingly important that if there is national legislation the State legislation should be uniform with it. We come in contact with that in a great many different ways. It is very embarrassing to manufacturing concerns to have a different law in every State. It should not be permitted. The Pennsylvania Railroad in going from New York to Chicago goes through several States, and every one has a different law in regard to headlights. Now, that is all wrong, and that is only an illustration of what exists in so many different ways, and sooner or later it must be cleared up. So it is, to my mind, very important that national legislation should precede, and if it precedes it should be founded upon the right principles; and the right principles can only be arrived at through the men who are working in this line, who are interested in it and who watch this legislation and take care that what is enacted is along the right lines.

It is almost impossible to secure any legislation whatever during the short session other than the large appropriation bills. I know of no session of Congress since I have been in Washington in which so little of an outside nature has been done as this session. Of course, there is a reason for it. There are many large matters pending there; the time is very short, at most; the House has a very large number of members and each has his own particular interests to get

through, so that the amount of actual legislation of a general nature during a short session is very small indeed. But do not think that because no particular bills have been passed nothing has been done; because I think there has been more agitation over there this year than in any previous session. I think more results have been reached over there than in any previous session, so far as the conviction of members is concerned that they must take this up and do something. I think they are thoroughly convinced of that, and I think that you are going to see legislation very soon along many of these lines that you are so much interested in.

Now, I have taken too much of your time already, but before closing my remarks I want to read a letter which I had intended to read in connection with the bureau's work of inspection. I stated that one of the objects was to stimulate and bring about better conditions in those States which are not organized, and I received a letter this morning from Mr. Smith, of Wisconsin, which pleases me very much. I will not take the time to read it all, but just this extract; and I will say that the results accomplished in this one instance, in this one State, to my mind fully warrant the expenditure of every dollar that the bureau has put into it.

As a result of the agitation, several of the larger cities of the State have organized or reorganized a city department of weights and measures. A most notable instance of this is found in Milwaukee, where, under the able leadership of City Sealer Janssen, a thoroughly equipped bureau has been established and an exceedingly aggressive campaign inaugurated. Mr. Janssen's work has been somewhat unique in that he has stretched the law to such an extent as to confiscate all of the illegal weights and measures which his five inspectors have discovered, aggregating over 8,000 weights and measures in the first nine months. I do not recall any such thoroughgoing work by any eastern city of like size. It seems to me that the confiscation of the illegal weights and measures should be a most important step in the effort to secure honest weights and measures. If such illegal measures are left in the hands of the dealers they may attempt to use same again or to perhaps sell or barter them in other neighborhoods.

I have recently inspected Mr. Janssen's office and find everything to commend. At the present time I am making efforts to organize similar bureaus in several of the other large cities of the State.

I am sending you, through Mr. Janssen, a copy of the new bill on weights and measures recently introduced in our State legislature, which I hope will go far toward improving Wisconsin conditions. Some of its provisions are rather stringent, but it is hoped that the machinery provided will be ample to enforce a thoroughgoing inspection. One important provision makes it obligatory upon each city of 5,000 inhabitants or more to have a city sealer. The smaller cities and villages are looked after by a county sealer. Two inspectors are provided for going over the State and inspecting conditions and seeing that the law is thoroughly complied with.

I think at the very first meeting a plan was outlined almost identical with that, and this one instance—it is only one of several—should be very gratifying to members of this convention. That a

State can be started up and an organization perfected in so short a time as has been done in Wisconsin shows what can be done through efficient weights and measures officials. Now, Mr. Smith for several years took absolutely no interest in weights and measures—I know him personally; I do not hesitate to say this; he is a very busy man and is interested in other things—and it was at this meeting that he became stimulated in these matters, and he went home and he did all he could to make amends and put the thing on a proper basis.

The secretary then called the roll, the following-named delegates being present:

Mr. MARONEY, Connecticut.
Mr. HASKELL, District of Columbia.
Mr. PALMER, Massachusetts.
Mr. CUMMINGS, Massachusetts.
Mr. AUSTIN, Michigan.
Mr. HAND, Mississippi.
Mr. JACKSON, Nebraska.
Mr. SULLIVAN, New Jersey.
Mr. REICHMANN, New York.
Mr. BAHRENBURG, New York.
Mr. THOMAS, Ohio.
Mr. DUNLAP, Ohio.
Mr. WALL, Pennsylvania.
Mr. BOYER, Pennsylvania.
Mr. EPRIGHT, Pennsylvania.
Mr. GOODWIN, Rhode Island.
Mr. WESCOTT, Virginia.
Mr. JOHNSON, Virginia.
Mr. HENRY, Vermont.
Mr. JANSSEN, Wisconsin.
Mr. MCINTYRE, Wisconsin.
Mr. EAST, Virginia.

The CHAIRMAN. The next on the program is the report of the secretary, who will also report for the executive committee.

The SECRETARY. Mr. Chairman and gentlemen: In regard to the report of the secretary, that is more or less involved with the report on the Bureau of Standards inspection. Happening to hold this dual office, my duties are very much mixed up, so perhaps what I may report as secretary may be repeated as delegate from the bureau. I must apologize, first of all, for not getting out this report of the last conference sooner than I did; but it was gotten out just as soon as I could without neglecting other duties which seemed to me to be more important. We had quite a number of demands for this, but instead of giving the information contained herein in the shape of a full report, it has been given out in the form of special reports, which

seemed to be very much more in demand than anything we might have in here, though we realize that this would have been of very great help to us if we had had it in time.

Now, the executive committee has had just one meeting as a committee, and that was this morning, when we decided on this program. I might state that we have had quite a number of informal meetings from time to time. I have met various members of the committee, both by visiting them and having them come here, and we have kept in touch with one another and have used the influence of this association whenever it was possible. Dr. Stratton touched on the importance of the work of this association, and I think we can not do any more than corroborate what he has said. I think that at the present time the agitation that is apparent in so many States is due almost entirely to the efforts of our association, aided, of course, to some extent by our inspection. At the present time there are State laws in regard to weights and measures in California, Colorado, Idaho, Indiana, Illinois, Massachusetts (new laws in Massachusetts which Mr. Palmer will tell us more about), Minnesota, Montana, Nevada, New York, New Jersey, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Vermont, Washington, and Wisconsin. I think that makes a very creditable showing. One of our members who was with us last year, I think, is to a great extent responsible for the new law in Vermont. Vermont has a new law, and a new commissioner of weights and measures, and, so far as the law is concerned, I think Vermont is as well off as any other State in the Union. This has been brought about largely by the efforts of Mr. Hazen, who has been with us a number of times, and also through the efforts of Dr. Reichmann and Mr. Palmer, and I claim some little credit for myself in the matter. Of course, the reports of the bureau are of great value in bringing the attention of legislators to the necessity of some new laws on the subject.

I think that is about all I have to report, Mr. Chairman, unless there are some questions that the delegates want to ask about some of our work.

Mr. REICHMANN. I move that the report be accepted.

Mr. PALMER. I second the motion.

The question was taken, and the report was accepted.

The CHAIRMAN. The next is the report of the committee to prepare a net-weight package bill and arrange for its presentation to Congress. The members of this committee are Mr. Quist, Mr. Palmer, Mr. Kjellander, Mr. Reichmann, and Mr. Yoder. I presume Mr. Palmer will report for that committee.

Mr. PALMER. Mr. Chairman, I am not prepared to make any extensive report. I think Mr. Fischer is a little more familiar with the details of it than I am. I am sorry to say that the committee has

had no regular meetings. Doubtless you all know that there is a net-container bill before Congress and that, to some extent, possibly the weights and measures interests of the country are directly responsible for it. I do not think I have anything to report in addition to that. Possibly Mr. Fischer can give us a little more light on it.

The SECRETARY. I might say, Mr. Chairman and gentlemen, that the Page bill, which was introduced last year, was submitted to Mr. Quist, the chairman of the committee, with the idea that he would get the opinion of the other members of the committee. As a matter of fact, he did nothing about it; and so, except for the fact that he gave his approval to the bill which was afterwards presented by Mr. Page, nothing was done. Mr. Quist is, of course, in one section of the country and Mr. Palmer and the other members of the committee in another, and that represents, I think, one of the difficulties that are going to arise every time we appoint a committee. It is going to be almost impossible to get these committees together. You will all have a chance, however, to look over this bill, although I do not think I have enough copies to go around. I tried to get them yesterday, but could not.

On motion of Mr. Reichmann, the report was accepted.

The CHAIRMAN. The next will be the report of the committee on organization of the Full Weight and Measure League, of which Mr. Reichmann is chairman.

Mr. REICHMANN. Mr. Chairman, the committee respectfully reports progress and would like to have further time.

Mr. PALMER. Mr. Chairman, I move that the report of the committee be accepted and that the committee be given further time.

The motion was duly seconded and carried.

Mr. REICHMANN. I would like to add, Mr. Chairman, that while the committee has not had a formal meeting, I do not want to convey the impression that this is simply a matter to be put off, because I have done a great deal on that committee and I think things are looking very bright for the formation of such an organization. But, as all of you know, to have an association of that kind requires money. It is not a matter of a hundred dollars, or two hundred dollars, or a thousand dollars, but it requires a good deal more, and it is a question of getting some philanthropically inclined multimillionaire who is willing to go into his pockets. I think we have three of our fingers in already; we want two more. I hope we can report the other two fingers in the pockets by next meeting.

The CHAIRMAN. I sincerely hope that something of that kind will go through. This organization is bound to become in time a purely technical one of weights and measures officials; and there is a large amount of work outside of that that can be done by such a league, which can handle things this organization can not possibly handle.

The next item on this program is the reports of the delegates. Heretofore we have given entirely too much time to the reports of the delegates, and yet we felt at this time that we could not cut them out altogether. Especially are we anxious to hear from the new delegates. I have been requested by the executive committee to confine these reports to three minutes. We will give the new members five if they wish. Personally, I think these reports are of the greatest value. The bureau must in time become a clearing house for these matters. Of course we get a good deal of it informally, by correspondence, etc., but the testimony of the officials probably is best brought out in the discussions that come up on specific points.

I will call for these reports in their order. The first will be Connecticut. We would like to hear from the delegate from Connecticut.

Mr. MARONEY. Mr. President, in regard to State laws, at the present time we are in the same condition exactly as we have been for a number of years. The State treasurer is the State sealer. But the legislature is in session at the present time, and they also have a bill introduced there which is practically a duplicate of the Mann bill in the National House. It has been pigeonholed for the time being, waiting to see what action you would take here in Washington. As far as local conditions are concerned, I am very well pleased to state that we have a new ordinance there, for which the members of this bureau are responsible—both Mr. Fischer and my friend, Holbrook. It went into effect last Monday.

Mr. REICHMANN. Where is this?

Mr. MARONEY. New Haven. The laws are identically the same as recommended from this department. That, taken in connection with the placing of the official there under civil service, appointment being made through examination and confined to the first three, makes it ideal. There is also a hearing there to-night on requiring the public-service corporations—I mean the electric light, gas, and water companies—to submit all meters, in both manufacturing plants and residences, to the department of weights and measures. It provides for fitting up a laboratory, and that these meters must not go out unless they are tested and sealed by the sealer, and that seal put on so that it can not be broken into. That, I believe, covers about all that I have to say. This hearing comes up to-night and the probability is that the bill will pass and will provide enough assistance to cover it in a thorough manner. That also includes milk bottles, and the idea is to take milk bottles before they go into the hands of the producers of milk and have them sandblown and tested, and in that way it will cover it pretty thoroughly. The new ordinance, as I stated before, went into effect last Monday. It is verbatim as this department sent it out.

The CHAIRMAN. Is there anything being done in Connecticut to bring about the appointment of a State weights and measures official?

Mr. MARONEY. I think it is about two years ago that we had a bill of that kind, but through internal dissension and perhaps a little jealousy on the part of some of the members of the State sealers' organization there, the bill was killed. I assumed all the responsibility of the expense of the organization for two years, and this year we are, to use a slang expression, "up a tree" in that matter. Eventually it will come, but it will not come until such time as they can get together and be harmonious and bury their individuality, and all get into a corner and find out who is to be the man. Until such time I do not think we will have a State sealer. There is one more thing I would like to mention. We have what we think is a very good law, namely, a butter law, which says that print butter must be 16 ounces, net, and stamped as such in half-inch letters right over the face of it.

Mr. GOODWIN. Mr. President, I would like to ask Mr. Maroney if it would be possible for him to give me a copy of the law regarding the sealing of water and gas meters, as there is a law being agitated now in our State for that purpose.

Mr. MARONEY. The law as we have it in New Haven at the present time became effective last Monday. The laws are now in the hands of the printer. I have ordered some 3,500 copies of them and I will be pleased to send copies of the laws, as they are, to any of the gentlemen here if they will kindly give me their addresses to-day or to-morrow.

The CHAIRMAN. I am glad to see that New Haven is interpreting the term "weights and measures" in the broad sense, in the modern sense. It must mean water meters, gas meters, and all those things. And I hope you people in organizing this work will not let the opportunity go by to take in these things.

The next State is Massachusetts. Mr. Palmer needs no introduction.

Mr. PALMER. Mr. President, the Massachusetts Legislature of 1910 made several additions to our State laws in regard to weights and measures, namely, an act relative to the sale of coal, coke, and charcoal; an act establishing bushel weights of certain commodities; an act relative to the inspection and sealing of weights and measures, which has amended the present act somewhat; and an act relative to the sealing of paper bottles and jars. The legislature of 1911 has before it at the present time some 28 bills relating to weights and measures, directly or indirectly, covering a variety of subjects. A few of these bills have been recommended by the State Department. Six of these bills relate to the placing of the net contents

on the outside of all food packages, and two relate to the testing and sealing of gas, electric light, and water meters by the State—in one case by the State commissioner of the weights and measures department, and in the other by the State commissioner of the weights and measures department and such additional town and city inspectors as he may designate. Then there are a variety of other subjects which are covered by the proposed bills. One relates to a standard barrel of apples, and there is another doing away with the tolerance on thread.

Those are the most important ones. There is another bill which relates to placing the licensing of coal dealers under the State department of weights and measures, and taking it from the secretary of state's office, where it is at the present time.

Very few of these bills have been heard. Our legislature is now in session, and they will come up for hearings within the next month. Some, I think, stand a very good show of passage.

The general conditions in Massachusetts, I think, are improving all the time. Our local departments are making progress, and I am glad to say that our various trade associations are doing a great deal to help us out. Mr. Cummings, who is with us to-day, representing the Boston Food and Produce Exchange, is quite often in conference with the department, and almost every week or two we have some information in regard to weights and measures and general trade conditions, not only in this but in the paper trades and other trades. I believe they are realizing at last that they should have weights and measures legislation; and it seems to me a good sign to see these various trade organizations come forward indorsing weights and measures propositions.

The CHAIRMAN. We will pass to the next State, Michigan, represented by Mr. Austin, who is with us, I believe, for the first time.

Mr. AUSTIN. Mr. President and gentlemen of the convention, I have nothing to report of progress, this being the first meeting I have attended of this kind. I am very much pleased to meet and personally know the men who are interested in this work. In Michigan, as in many other States, the State treasurer is the custodian of the standards of the State—such standards as they possess—for safe-keeping; and safe-keeping is the proper word. I think that in addition to that we should have working standards, and working men to carry out some uniform system of weights and measures throughout the entire State. At the present time we have none, and the result is that the county treasurer, being the custodian of the county standards, appoints a deputy, whose sole duty is to examine the weights of the city sealer—that is, my own weights—so that with the exception of some seven or eight of the larger cities which have felt the necessity and have attempted to regulate the matter by

ordinance, there is no organized system of inspecting weights and measures. Those cities are Detroit, Grand Rapids, Port Huron, Pontiac, Flint. I do not know about Saginaw; I understand there is a sealing system there. In Detroit the city official and his assistants are appointed by the police commissioner. That office has had but two incumbents during the last 37 years. Mr. Heyl, my predecessor, held the office for 26 years, and I have been there 11 years. In fact, the department, I take it, if it is progressive, is not interfered with through any political changes that may occur.

Having only recently received notice that I was appointed delegate to this convention, I had not time to prepare anything very satisfactory to myself. I will say that in the city of Detroit we have about 40 square miles of territory; we have perhaps 1,400 grocers, 500 or 600 meat dealers, about 400 or 500 confectioners, and about 300 bakers, together with the manufacturing interests. Since Detroit has become an automobile center it has attracted many other classes of manufacturing, and most of them contribute something to the work of the sealer of weights and measures.

I do not know of any better way of giving the gentlemen an outline of the work which I am doing in the city of Detroit than to quote from my annual report of June 30, 1910. I will say that I have been furnished with an auto conveyance for conveying my weights and facilitating me in my work. I have at present four assistants. Last year the total number of scales tested was 4,464, of which I found 3,479 correct and 987 were condemned. That includes those that were unfit for service at the time, but many of them were capable of being repaired and readjusted and put in working condition. The balance of those were stamped "Condemned," or confiscated. Dry measures, 5,449; 5,210 approved and 239 condemned. Liquid measures, 8,597; 4,882 approved and 3,715 condemned. Individual weights, aside from those that were tested in connection with the scales, 692; approved, 573; condemned, 119. Milk bottles tested, 628,060; approved, 604,955; condemned, 23,105. In connection with the milk-bottle inspection, we test each bottle and mark those that are correct with the letter "M." Our ordinance requires that all scales and measures shall be marked with the letter "M" or the word "Approved"—we choose to use the letter "M"—and the date. Those that we find incorrect we stamp with the word "Condemned." The total inspections for last year were 647,262.

We visited bakers 120 times in reference to the weight of bread. We weighed last year 1,314 loads of coal in transit. I will say that that is considerably below the average amount of coal that we weigh yearly. That is occasioned by not having any additional assistance, and the going into the milk-bottle inspection, which consumes a vast amount of time.

The complaints, I imagine, would be uninteresting to most of you.

We have in the city of Detroit something like 50 or 60 railroad track scales which we are required to inspect. We have some very good ordinances regulating local matters, but we find much difficulty in the sale of fruits and vegetables, of which a large proportion is shipped in from outside States or from the district outside of Detroit in the State of Michigan, and consequently the sizes of packages, boxes, crates, etc., vary considerably. The local courts are reluctant about enforcing the city ordinance on the ground, as they claim, that it will divert the patronage of that class of merchandise from the city. Two years ago I drafted a uniform-package bill, which the Retail Grocers' Association fathered, and presented, and backed up, requiring that all fruits, vegetables, nuts, berries, etc., should be sold in nothing but uniform measures conforming to the standards of dry measure. That bill stood a good chance of being passed, but was defeated on the eve of its passage by a concerted effort of the commission merchants, who contended that the whole State of Michigan would not be sufficient market, so that if there was any restriction made on the size of packages to come into Michigan, or the city of Detroit, it would be diverted elsewhere and we would be the sufferers. I feel convinced that the representative business men of Detroit, and Michigan as a whole, are entirely in sympathy with some system of weights and measures that will be uniform throughout the United States, both in regard to net containers and a full-measure law. The State Association of Retail Grocers, at their meeting at Port Huron, which has just closed, adopted resolutions toward aiding in passing a State law which, I understand, the Grand Rapids delegation are placing before the present legislature, providing for a uniform standard for the sale of merchandise—or the sale of fruits, vegetables, berries, etc., at least—in full-measure packages. They also passed a resolution to urge and further the appointment of a State sealer who shall have authority and shall be active in assisting local sealers, and establishing others, wherever possible, for the purpose of making the weights and measures system of the State uniform. I feel satisfied, gentlemen, that if I can get from this body, or from anyone present here, a copy of the Federal laws that have been introduced, and also the city ordinance proposition that will be in conformity with such Federal regulations, if passed, I can secure the aid of some of the best men in public office in Michigan, as well as the grocers' association. The Retail Grocers' Association of Michigan and the local institution of the same kind are heartily in favor of such a movement, and I know they will give all the aid within their power to bring about those conditions. I thank you for your attention.

Mr. THOMAS. Mr. President, I would like to ask one question. How is the work of the city sealer at Detroit done—on the fee basis, or salary basis, or a mixed basis?

Mr. AUSTIN. I beg pardon; I should have mentioned that. The sealer is appointed by the commissioner of police. Both the sealer and his assistants are appointed from members of the police force, and receive compensation as such. There are no fees or other charges for any work performed by the weights and measures department of the city of Detroit. That same thing is true of Grand Rapids, Pontiac, Flint, and Port Huron. I think the system is rather inadequate in the other few cities that have established a system, but I can not say as to their method, whether they charge a fee or not; but as to Grand Rapids, Flint, Detroit, Port Huron, and Pontiac, they have no fee system; they are all paid as regular officers of the city. The department is maintained through appropriation, and there is no charge to the person whose scales we are testing or examining, unless he has to make corrections.

The SECRETARY. In connection with the statement just made by Mr. Austin it may be interesting to members to know that the results of our investigations seem to indicate that in the matter of weights and measures Detroit, if not the best, is certainly one of the best cities in the United States so far as we have investigated. I think that perhaps the fact that they do not charge fees may have something to do with that.

The CHAIRMAN. The next State is Mississippi. We will be glad to hear from Mr. Hand.

Mr. HAND. Mr. Chairman and gentlemen, nothing has been done up to this time in Mississippi looking toward an effective administration of any laws which we may have on our statute books concerning weights and measures. I believe this is a very opportune time in which to bring the matter up, because I happen to know that our present governor is very much interested in this matter; and but for the fact that it was brought to our attention through Director Stratton, perhaps our conditions would have remained as they are for many years to come.

We have in our State an inspection of fertilizers, cottonseed meal, and so on, as maintained in other States of the Union, and we maintain inspectors for this purpose; and I believe it will meet with the governor's approval, and that he will urge it upon the attention of the legislature, if we can propose some suitable bill by means of which the organization now maintained for general police work with regard to food, fertilizers, and feeding stuff can be used in this work with the weights and standards. For this purpose I hope that we may receive the assistance of the director and the helpful cooperation of the association, because Gov. Noel is, I am certain,

very anxious to bring this matter to the attention of the lawmakers. Up to this time disputes between the electric-power consumers and those who generate electric power have been adjusted largely by the school of electric engineering of the agricultural college, and the State chemical laboratory is also connected with the agricultural college. We have there also supervision over the weights of fertilizers and feeds. At the last session of the legislature we made a very heroic effort, as we thought, in the passage of our pure-food law, to require manufacturers to stamp the weight on the package; and I was very much surprised to find the enormous amount of pressure that was brought to bear from New York City to San Francisco against that provision. We had so much trouble that we were finally advised that it would certainly defeat the bill if we insisted upon that clause, so we eliminated it. But I believe that this is almost the nick of time in which to bring it up, and we are certainly very glad to have the opportunity of receiving your cooperation and assistance.

The CHAIRMAN. That is what we like to hear.

Mr. AUSTIN. Mr. Chairman, if I may be permitted, I have thought of one other matter that I would like to speak of at this time. I just made a note here as to the nature of scales—the manufacture, sale, and use of unjust and defectively constructed scales—and also of tolerances. If that will be touched later on, I will be satisfied to wait.

The CHAIRMAN. It will come under tolerances. We have a bill pending before the Weights and Measures Committee on scales, and I think we ought to take that up later.

Mr. Reichmann has asked to be excused at this time. We have with us, from Ohio, Mr. Thomas and Mr. Dunlap. Which of these gentlemen will report for the State of Ohio?

Mr. THOMAS. Mr. President, since the last meeting we have both held—or rather I have held and Mr. Dunlap is now holding—the office of State sealer, so I will tell you a few things only about what happened up to the time he took hold.

As I told you at the last meeting, the committee known as the “High-price food probe committee” of the senate was looking into the question of weights and measures with reference to its possible bearing upon questions of high prices of food. They became interested in the matter, and themselves wrote three or four bills and introduced them, for amendments to the weights and measures laws. One of them was a bill regarding the weight of a loaf of bread. It had two provisions; first, that the standard loaf of bread should be 1 pound—16 ounces avoirdupois; secondly, that the baker should put a label not less than 1 inch in diameter on each loaf of bread. At a public hearing on that bill the discussion was divided and

directed to the two points. The bakers were well represented, as the interested parties always are, and the people were not represented at all. They developed in the course of the hearing that the bakers did not want to have the 1-pound loaf requirement. When they got through talking about that they turned to the other requirement, and they were very much against labeling the loaf. They did not want to have the loaf any definite size, neither did they want to be required to state how much there was in the loaf. In other words, they wanted to be left a free hand on the bread situation, and as no effort had been made to organize support for the bill from the people's side, of course the bill died there in committee.

Another bill related to the confiscating of any weighing or measuring device, maintained by any person in business, which had not been tested and sealed officially by some sealer of weights and measures. There was no hearing upon that bill. It simply had the honor of introduction and reading and resting in the committee's hands. And so with two or three other bills. However, the agitation led to an increased awakening of public interest which has been of considerable value.

The only bill introduced from this committee which was passed was a bill making a change in the principal State law regarding weights and measures, and also making the State dairy and food commissioner ex officio State sealer of weights and measures. I had urged some action toward placing the work in the hands of some one who could give his whole time to it, urging, in accordance with the recommendations of this body, that the office of State commissioner of weights and measures should be created and equipped properly for efficient work throughout the State; but I was told in reply that there was a working agreement throughout the legislature that there should be no creation of new State offices during that session of the legislature. But something was needed to be done, and therefore the same committee of which I spoke drew up and introduced a bill transferring the duties of State sealer to the dairy and food commissioner, the statement being made that he had a great number of inspectors already at work, that he had a good deal of money given him for use in connection with his office, and that it was hoped, therefore, that he would be able at least to make a start toward an effective administration of the new law, and get some experience in connection with the matter which would be useful at the time of the meeting of the coming (that is, the present) legislature. I talked against the idea of making the weights and measures matter subsidiary to any other duties on the part of a State officer, but I said that if the tenure of office of the dairy and food commissioner could be made permanent, or at least during good behavior, I should be delighted to have the law passed just as it was, because the dairy and

food commissioner was a man whom I knew personally and in whom I had every confidence. Probably some of you know what power his name carries in connection with dairy and food matters in the State of Ohio, and what respect violators of the laws relating to that subject feel for him in Ohio. It was the expectation at the time this law was introduced and passed that Mr. Dunlap would certainly succeed himself, but some funny things happened in Ohio last fall, as you know, and another man takes Mr. Dunlap's place. Regarding the things that happened since the passage of that law, Mr. Dunlap will tell you about those, and I take peculiar pleasure in introducing to the president and the members Hon. A. W. Dunlap, dairy and food commissioner of Ohio.

Mr. DUNLAP. Mr. President, I certainly regret to report to this conference that we have not done very much in Ohio since the law was changed. This new law was passed the last day of the session of last year, 1910, and no appropriations were provided for the enforcement of the law, and nothing whatever could be done until we had the wherewithal to do it. However, we discovered a fund at the beginning of this year, January 1, that we were able to use for that purpose, and we began on the first day of this year to compare standards and to work generally along the line of enforcing the law.

The law is not what it should be. It was passed very hastily; it is loosely drawn; and there certainly should be a great many changes made in it. Since we started in, the standards from all the cities have been compared, or will be by the time my term expires next Tuesday. The law requires the city sealers and the county sealers (county auditors) to deliver to the State sealer their standards once every three years. I will say that there have been a great many of these city standards that are practically worthless, and have not been sealed. My chief man in that department, Mr. Anderson, reports that practically all of the city standards will be sealed by next Tuesday.

We made a little exhibit at the National Corn Show, which was held at Columbus in January and the early part of February, of some of the weights and measures that we found used in the markets. They attracted a great deal of attention, and we know the people are back of this matter at this time, and I think that if the bills were introduced and followed up a good law could be perfected at this session. But I regret that owing to the change of administration I doubt whether the new man will have time, owing to the many other duties that he will have in enforcing the present law, getting acquainted with the office, and also looking after the enactment of laws that have already been introduced regarding food legislation. But if it is not done this session of course it will have to be delayed for

two years, as our legislature will not meet again until two years from this January.

There have been three bills introduced in the present session, one of which—half a law or a third of a law, you might say—passed the house, regarding net weight on packages. I have not compared this bill with the proposed Federal law, but it is not too late yet to have it conform with the Federal law, and my experience with food matters is that it would be quite an advantage to have a uniform law. Our Ohio food law does not quite conform to the Federal law, and we find there is a great deal of conflict and more or less trouble in enforcing the law for that reason. So I believe, if this matter were looked into at this time, this law (which is now, as I say, only half a law) might be made to conform. I regret, of course, that I will be compelled to discontinue the active work, but if I can be of any service to my successor or anyone who is interested in getting this law passed, or getting the weights and measures matters adjusted, I will be very glad to do so.

The CHAIRMAN. I am very glad that Mr. Dunlap is with us, and I am going to take this occasion to make a statement, and I am glad to do it in the presence of Mr. Dunlap, and especially since he is going out of office.

This matter that he has just touched upon is a very serious one, and much more serious to you in your work than you suspect. Now, I think that your food law is one of the most important pieces of legislation that have been enacted. It is very far-reaching. Certainly no one can deny that these pure-food inspectors and those who are interested in the administration of that law should be on the continual watch for weights and measures errors as they appear in food products. But that is quite a different matter from the organization and the handling of the weights and measures affairs in the State. It is a problem almost as large as the pure-food work itself. The two things must in the end be separate. What would you think, Mr. Dunlap, if in some State, as in Massachusetts or New York, where the weights and measures are well organized, the pure-food matters should be put in the hands of the weights and measures officials? It would not work at all. And yet the weights and measures officials should be on the continual lookout for errors or transgressions of the law in regard to food. And so the other people can no doubt be of great assistance in weights and measures. But we should look to the future, and we should look beyond the mere weights and measures used in food, important as they are. This weights and measures matter is sure to include all of the measurements of public utilities. Now, would you want the electric meters, and the gas meters, and the water meters, and all that under the pure-food inspectors? It seems to me that both are sufficiently im-

portant to be placed under separate officials. The question of food is largely one of chemistry; the question of weights and measures is largely one of physics; and the regulation and inspection of all these measurements of public utilities is coming very soon to command the very highest talent. The regulation of water meters, gas meters, and electric meters is going to be just as important as the pounds and yards of our commodities.

Now, I want to make myself perfectly clear, and I want to make the bureau's position perfectly clear. We are for good weights and measures, no matter how it may come about. It is better to have it in connection with the pure food than not to have it at all, and in any case there should be the closest cooperation, and the pure-food inspectors should assist in every way in carrying out the weights and measures law, and I believe that is what it will come to. But I would like to see the main administration of the great problem of weights and measures put into the hands of men trained for that purpose. I do not want any misunderstanding about the position I take personally and the position the bureau takes.

Mr. DUNLAP. Mr. President, I assure you I quite agree with you regarding that matter. But in Ohio our executive has adopted the policy of consolidating as many of the various departments as possible. There is, I know, a movement on foot to consolidate the agricultural department with the dairy and food department and several others, and make one head, and divide it up into bureaus. The legislature would not approve that method of having a separate department, at this time, at least; but I think we should work in that direction and finally have a weights and measures department separated from everything else. My intention was to establish a separate bureau, put a competent man at the head of it, and hold him responsible for the work. In that way he would give all his time and attention to that and nothing else. But as I say, the thing is cut off at this time.

The CHAIRMAN. I am very glad to hear you say that. I feel that anyone who goes into the subject will; and that is why I say that both the pure-food officials and the weights and measures officials ought to cooperate with each other, and each try to bring about legislation along the two main lines. If there must be consolidation, it is better to have it than no organization at all. I quite agree with you.

We have two delegates from Pennsylvania. I believe Mr. Wall is the State official.

Mr. WALL. Mr. Chairman and gentlemen of the conference, as I have stated at two or three other meetings, we are in a peculiar situation in Pennsylvania with reference to the sealing of weights and measures, for the reason that the constitution prohibits the creation

of a State office. We are now endeavoring to get around that peculiar situation. We have drafted, and have before the present legislature, a bill for sealing weights and measures, thus bringing the matter up to a certain point. Then we have another bill creating a bureau of standards and putting it in a department, so that we will not create a State office. We want to avoid that; we want to prevent the possibility of the law being knocked out by the Supreme Court, if it ever gets up there, and prevent conflict with the State constitution. That paragraph of the constitution provided that no State office shall be created or continued for the inspection or measuring of any merchandise, manufacture, or commodity, but that cities or boroughs may by ordinance create such an office when authorized by law. We have several cities that have sealers of weights and measures, but the councils have to make the laws. We have no State law. But we think that that paragraph of the constitution gives us the authority to have a State law as a foundation for ordinances in the cities, and so as to have uniformity throughout the State; and that is our situation now. Two years ago we had an act before the legislature; it passed the house and senate and went over to the governor, and he vetoed it. He vetoed it for the reason that the act provided for the collection of fees and the payment of the inspectors by fees or salary, at the discretion of the council. Now, in the present law we cut that out; there is no mention of fees at all. The bureau of standards, as we have it framed in the act, is to take care of the standards furnished by the Bureau of Standards here—we will have to buy another set, and that law provides for the purchase of another set of State standards—and the “bureau act,” as we call it, provides for the appointment of officers to take care of them and standardize the local weights and measures; in other words, city sealers. The present bill covers only cities. Some think it ought to cover boroughs, because we have a good many boroughs that are large enough to become cities, but they say they do not want a city government; they want to hold on to the borough administration.

Now, Mr. Boyer, here, is local sealer of weights and measures at Harrisburg. He has been working for about two years, and I think he can say a few words on what he has found.

The CHAIRMAN. If there is no objection, we shall be glad to hear from Mr. Boyer.

Mr. BOYER. Mr. Chairman and gentlemen of the conference, I will not take much of your time, though I would like to add a little to what Mr. Wall has stated in regard to the proposed legislation. I would feel my trip very well repaid if I could go back to Harrisburg with the indorsement of this conference, either by resolution or otherwise, of the bills which have been presented to the legislature, and of which Mr. Wall has just spoken. It seems to me that

it would give us a powerful weapon if we had an indorsement from this end.

There are strange things happening in Pennsylvania, of which possibly some of you have heard. I came very near purchasing the standards that were partly destroyed by fire some seven or eight years ago. I was very close to buying them the other day, but the city solicitor suggested that I had better leave my fingers off of them. I understand there are several of them in possession of the bureau of municipal research in Philadelphia. But there is one of the greatest misfortunes that could have possibly occurred. I doubt very much whether it would be possible to replace the standards that have been taken away from the State. The bushel, the half bushel, and several other of the smaller dimensions of the dry measure were made of the prettiest brass I ever laid my eyes on—of such a nature that it could not be corroded; it was unnecessary to put time and labor on it to keep it in a polished condition; it had a natural finish that stayed there under all circumstances; and those standards had been in use since 1845. Of course, we can get standards nowadays that will answer the purpose very well, but it is a great pity to see the material going to waste, as that did when it was melted up for junk.

In the city of Harrisburg we have 2,157 market places and over 1,100 grocery stands, including meat, etc., and if you gentlemen will consider that each of those has anywhere from three to a dozen weighing and measuring instruments, you can imagine that a single individual like myself has his hands quite full. I have absolutely no law to work under except the ordinance which created my office, and I have stretched it to its elastic limit. As Mr. Fischer can tell you, I sent him a photograph some time since of the confiscation I had made, and upon every one of them I am threatened with suit for taking somebody's property.

I have had some intensely interesting experiences that are contributing very much to the good of the cause. The members of the legislature, in session at Harrisburg at the present time, spend quite a little time at my workroom, which is in the cellar of the county courthouse, and my exhibit has proven quite a novel one to them. So I would request, gentlemen, that I may have your support for my resolution and my measures, which I will let you see after a while. I thank you for your attention.

The CHAIRMAN. Mr. Boyer has called attention to a very important matter, and one which I think is quite proper for this association to take up, namely, the indorsement of proposed State legislation. I do not believe that question has ever come up here before, but I see no reason why it should not be done. I hope you will bring that up later.

Mr. BOYER. Mr. Chairman, let me add just a word. I was instructed to get that support if I could. You see, we have an uphill fight. As Mr. Wall told you, a splendid bill was vetoed by Gov. Stuart on account of the objectionable feature of fees. Now, my ordinance carries a fee feature, but I do not touch it. I have not collected a fee since I have been in office.

Mr. REICHMANN. Have you got the bills?

Mr. BOYER. Yes; I have them with me.

The CHAIRMAN. Are there any questions? If not, we would be glad to hear from Mr. Goodwin, of Rhode Island.

Mr. GOODWIN. Mr. President and gentlemen, my report will be very brief. I was disappointed in not receiving the report of last year's conference, as I expected to formulate some data and write up some briefs that would be of advantage to me to present at this meeting. As it is, I can make only a very brief report regarding conditions in Rhode Island.

It is a satisfaction and pleasure to me to say that the sealing laws of the State of Rhode Island are being enforced, and I think that our system in that State is nearly perfect. There are many matters that I want to introduce into our legislature in the near future, pertaining to foodstuffs and the regulation and inspection of gas and water meters and such devices as that which would interest our public. I was very pleased to-day to hear that subject discussed, as it is something that is being agitated in our legislature at the present time; but not being able to get any data on it I could not help it along, which I want to do, of course. There are several matters of importance that I hope will be discussed, so that I may take back to the State of Rhode Island some data that I can lay before our legislators.

One of my great objects is to find out what my neighboring States are doing, and what the conditions are in Massachusetts, Connecticut, and, in fact, all over New England. Now, I find, by comparing the standard weights of different commodities in the States adjoining Rhode Island, that we have a variation in the weights of different articles, bushels, etc., and I am very sorry that such is the condition. In reading one of the old reports of this organization—I think it was the report for 1907—I saw where Hon. Oscar Straus had advocated a national law to govern this subject for all the States alike. I would ask you, Mr. President, if any legislation has ever been passed by the National Congress regarding this matter.

The CHAIRMAN. I think, perhaps, you had better defer that until we come to the discussion of Federal bills introduced, etc., which is on the program here. That will come up then.

Mr. GOODWIN. Very well. I do not know that I have anything else to offer at the present time. I am pleased to be here. There is one

thing which gives me pleasure to state. My appropriation for traveling expenses as State sealer of weights and measures was very small. I had a resolution offered to the legislature last year for an increase, and it was graciously given to me, and has been of great assistance to me in enforcing the sealing laws throughout the State of Rhode Island. It has given me an opportunity to get in touch with every sealer in the State, and has been of great advantage in furthering the interests of the sealing laws. I have great pleasure in saying that our governor is a man who is deeply interested in the subject of our sealing laws, and is very anxious at all times to further anything that is in the interest of the people, which, of course, is deeply appreciated. He is now elected for the third term, and has given good service. I do not know that there is anything more that I can say to-day that will be interesting to the members here, but I hope to be able to get some data on the subjects I have mentioned, so that I may be able to get some legislation passed regulating these matters. I thank you, gentlemen.

The CHAIRMAN. If there are no questions you wish to ask the gentleman from Rhode Island we will be pleased to hear from Mr. Henry, of Vermont.

Mr. HENRY. Mr. Chairman, in Vermont the law is both new and old. It is old in the sense in which the subject of weights and measures is old in all the other States, because we had the State standards, of course, a great many years; and, besides, we had on the statute books laws to provide for a working system in the counties and in each town. There is a provision for a full set of standards for each county and for each town and city, and it is made mandatory upon the county treasurers and city and town treasurers to provide their offices with these standards, and to act as sealers. That law existed a good many years in the State of Vermont without anything being done. There was a very little work done in the city of Burlington and in the city of Rutland, but I do not know of any other place where anything has been done. At the last session of the legislature a new weights and measures bill was passed, and most of the old law was repealed. This law was passed with the help of Mr. Fischer, of the bureau; Dr. Reichmann, of New York; and Mr. Palmer, of Massachusetts; and I think, as has been said by Dr. Stratton, that it is a good law, because it is a general and elastic sort of a law. I presume it is very incomplete; and yet, of course, I am very incomplete, because I am the first commissioner up there, and it is really a new subject to me. I have only been in office since the first of the year. As yet we have not done any active outside work. But there is one point I want to bring out that is a little unique, you might say, in our State. The system there will probably be different from the system in the other States, as far as I know. In a great many States there

are active local sealers and active local ordinances or laws, without any State organization, and in the rest of the States there are active State organizations in combination with active local organizations. In Vermont it was the pleasure of the legislature to leave on the statute book the law requiring each city and town to have a full set of measuring standards, and making the city treasurer ex officio sealer of weights and measures. I talked with several of the members who were most urgent to pass this law, and as I understand it—and that is the way I shall treat it at the start—that simply remained on the statute book as a matter of form. The idea is to have in our State a State department, and to have all the inspection and sealing under that department except as it seems to be expedient to have the local sealers in some of the larger places. Of course, the conditions in Vermont are a little different from those in most of the States, in that we have not any very large cities—that is, large from the census point of view. We have some cities that feel large enough, but they are not large in population. It seems to me that the scheme which is apparently laid out for me to follow, and which I think best to follow—that is, of having this work all under the State department—would be the most uniform and most economical scheme. If there are any suggestions from anybody on that, I would like to hear them.

There are several good points about the flexibility of our law there. As I say, it does not go into detail; it simply provides for the general inspection of weights and measures and leaves it to the department to decide how often the inspection shall be made. It gives the department full police power for making such inspection, allows inspection at any time, and allows a certain scope for the commissioner to make rules governing the sale of commodities. It deals wholly with the subject of commodities, as I interpret it at the present time, and on the statute book there is very little special law in regard to commodities. We have a State which is noted mostly for its agricultural products, but we have no butter law, which seems a strange thing. But I suppose that will be regulated, and that a rule for butter and for similar products will be made by the department. If anybody would like a copy of the laws I shall be glad to furnish them. I have taken the addresses of all the delegates whose names are given there, and I will send them copies of the law as soon as the revised edition is out. I have some copies of the law here, which are almost correct, but there have been a few minor changes. I will send everybody a copy of the law as soon as they have it out, which will be in about a week.

Dr. REICHMANN. Mr. Chairman, I would like to state that three or four times the State of Vermont has been mentioned as enacting legislation, and no one has mentioned the name of the one man who

is more responsible for the enacting of that legislation in Vermont than all the others put together. That man is Mr. Clement, of Vermont. To be sure, a formal action was taken by Commissioner Prouty, but those formal actions do not amount to much unless some one man puts his shoulders to the wheel and pushes it through. Now, Mr. Clement had an exhibit at the State fair, and I saw Mr. Clement at least once a week for about eight weeks. He went over all the details of that bill, and that man worked night and day for that bill; and if it had not been for Mr. Clement's efforts that statute in Vermont would never have been passed. I think the commissioner of Vermont will substantiate that statement.

Mr. HENRY. I would like to substantiate that statement. I think it is wholly true; certainly Mr. Clement used a great deal of energy; he is a very energetic sort of fellow, anyway, and he devoted a great deal of time without, I imagine, much remuneration.

Mr. REICHMANN. With absolutely no compensation. It was all at his own expense, and the bill particularly provides, at his request (because the accusation was made that he was working to have the position himself), that none of the commissioners appointed by the governor should be appointed. It was one of the most unselfish philanthropic pieces of work I have seen in a good many years—the work that Mr. Clement put on that statute.

Mr. HENRY. Yes. That provision was in the other bill but was not in this bill; but Mr. Clement gave it out that he would not accept the position under any consideration. Before I allowed myself to become a candidate for the position I had a talk with Mr. Clement, and he said he would not take the position under any consideration. I think also that Ex-Gov. Prouty's name should be mentioned, because he did a great deal, I think, in fathering the bill.

Mr. REICHMANN. Yes; he did a great deal in fathering the bill and appointing the commission; but, as I said before, the mere formal act of appointing a commission does not pass a bill. It was the one man who was back of it, and who spent time and money, devoted all his time, night and day, to pushing that bill, who actually put it through.

The CHAIRMAN. I wish we had Mr. Clement in several other States.

Mr. REICHMANN. That is exactly what you need in every State. If you can not get one man in every State to push a certain measure, and keep right after it night and day, and make life miserable for the persons who are opposed to it, you will never get it through. I think that is the history of practically every bit of legislation.

The CHAIRMAN. It is not only true of State legislation.

Mr. REICHMANN. No; it is true of all legislation.

The SECRETARY. Mr. Chairman, I think that Mr. Hazen's name should be mentioned in connection with that matter.

Mr. REICHMANN. His name was mentioned.

The SECRETARY. While he did not, perhaps, put as much time on it as Mr. Clement, he is a very influential man in the State, and I think he had a great deal of influence in having the legislation enacted. But I quite agree with Dr. Reichmann that Mr. Clement is the man who really did the work.

Mr. REICHMANN. I do not take any credit away from Mr. Hazen; far from it. Mr. Hazen is a man who by the influence of his word could help it, but he did not, like Mr. Clement, devote time and money, night and day, to push the matter along; and the mere fact that Mr. Clement's name had not been mentioned at all was what led me to make this statement.

The CHAIRMAN. I think Mr. Hazen's part in this matter illustrates very well what I said we hoped to get from those members who are not weights and measures officials. Mr. Hazen had a great deal to do with the movement which resulted in the establishment of the State inspection service in Vermont. The first time he came down here he confessed that he was not greatly interested in the matter. He very soon got the spirit of the meeting, however, and when he went back he did all he could. I am very glad you brought this up, Dr. Reichmann. I think the association ought to recognize such men.

Dr. REICHMANN. Give credit to whom credit is due.

The CHAIRMAN. We still have a few to hear from. The next is the District of Columbia. We have heard Mr. Haskell quite often, and are always glad to hear from him.

Mr. HASKELL. Mr. President and gentlemen of the conference, I merely desire to say that we are carrying out a careful system of inspection of weights and measures in the District of Columbia daily, and that I would be pleased to have any member of the conference call at our offices, where we can explain our mode of doing business a great deal better than I can here. Our office is in the District Building, at the corner of Fourteenth Street and Pennsylvania Avenue.

Mr. GOODWIN. Mr. President, I want at this time to impress upon the gentlemen whom we have present that it would be an advantage, I believe, for each and every one to visit Mr. Haskell's office and have him explain his methods of doing business. I called on him yesterday, and he certainly gave me a great insight into the admirable method that he has of doing the business of sealing. I think such a visit will encourage every member who is not thoroughly posted. Of course these old war horses, such as Mr. Reichmann and Mr. Palmer, do not need encouraging, but generally speaking, the majority of us do; and Mr. Haskell has such a very nice system that I think it would be of advantage for each and every member, the new members

especially, to visit his office and look into his methods of doing business. I hope they will take advantage of the situation.

The CHAIRMAN. We have with us a representative from one of the latest States to come into line, one from which we hear so many good things. And we can say this, that when Wisconsin does take up any progressive movement it goes right ahead and does it well. So we are all very anxious to hear from Wisconsin.

Mr. JANSSEN. Mr. Chairman, I have not very much to say about Wisconsin at this time. Mr. Smith, our State sealer, who has been very active since your last meeting, has drafted a bill, with the assistance of your office, and has introduced it into the legislature; and we have every reason to believe that he will get very favorable action on it. I am the sealer of Milwaukee, and there are a good many points which we would like to have brought out that Mr. McIntyre will take up for me. I thank you.

The CHAIRMAN. We will be glad to hear from Mr. McIntyre.

Mr. MCINTYRE. Mr. President and gentlemen, I had not intended to take any part in the reports of State delegates. The matters to which Mr. Janssen has just referred are matters which will come up under other heads of this program, and I would much rather take them up then. The bill which has been drafted by Mr. Smith is substantially in the form in which it was drafted in this office. There were some changes; one in particular, placing the State superintendent of weights and measures under the department of the dairy and food commissioner. We have already had some discussion on that, and I presume later in the conference we will have more. Is that correct, Mr. President?

The CHAIRMAN. It will naturally come up under one of these items, "Discussion of Federal bills and other legislation."

Mr. MCINTYRE. There are quite a number of points which are raised in that law, and I think will be raised in connection with the other States generally, which will all come up, I think, under the discussion later on. I do not care to say anything on them at present.

Mr. Janssen's work in Milwaukee is pretty well known, and he has copies of his annual report, which will speak for itself. We have in Milwaukee, of course, a socialistic administration, which makes it somewhat different from any other large city in the country. I am not a socialist, and neither is Mr. Janssen. We have a large number of officials who are not. They have shown a great deal of liberality in making appointments outside of their party, and it is very interesting to note the attitude they have taken toward progressive legislation in the city, and the efforts they are making in the State. The progressive legislation has certainly received most hearty support through the efforts of their party, without its being carried to the extent of radicalism; and that has been true in our department of

weights and measures. They have conceded, with the exception of raising salaries, practically all the points which we have asked, and we are getting their hearty support—so much so that when the matter of sending a delegate to this conference came before them they immediately agreed to it. We put in the resolution only last Monday, after the council meeting had been called, to have a delegate from the city attend this conference, and it was passed unanimously.

The CHAIRMAN. I want to add that Mr. Smith not only stirs things up in his State, but also with the Wisconsin delegation in Congress. We find them calling up every once in a while and wanting to know what they can do to help things along. When Wisconsin does get after a thing, it moves.

Mr. JANSSEN. They have been to my office in Milwaukee and made inquiries.

The CHAIRMAN. Several of the Wisconsin delegates have been of the greatest assistance to the bureau. They are taking the keenest interest in this work and following it right up.

Now, we have still one State to hear from, and I am sure we will not be satisfied to let Mr. Reichmann go without hearing from New York.

Mr. REICHMANN. Mr. Chairman and members of the conference, the weights and measures matters have made great strides in the State of New York since the last meeting here. We had one bill passed last year which was in the line of constructive work; that is, we abolished 826 different positions, all the town sealers. We abolished all fees, and every county and every city has a sealer, all upon a salary basis. Every one of these sealers has to make a sworn report to me, and I have general supervision of all the weights and measures conditions in the State. As I reported at the last conference, the conditions in the city of New York were deplorable, and it was impossible for me to interest the city administration of New York in the matter until Mr. Gaynor became mayor. He immediately became interested in the subject, and the question was how to get rid of the head of the bureau then existing. The head of the bureau was a man who simply took no interest in the work, and consequently nothing was done. It was a comparatively simple matter; it only took five minutes to get his resignation. I recommended to the mayor that the department in New York City ought to be made an independent department, and that the salary should be \$5,000 a year instead of \$2,500; and he followed those recommendations and appointed a newspaper man, Mr. Driscoll, as commissioner of weights and measures of the city of New York, changing the title from chief of the bureau to that of commissioner of weights and measures of the city of New York. Mr. Driscoll was

a typical newspaper man of the sensational type, and for two months he collected all the data possible, and then immediately corralled all the newspaper men and all the hack magazine writers and gave them information from which to write sensational articles. You have probably noticed some of the articles in the magazines; they were very much of the sensational type and very full of inaccuracies. Those had been preceded by a number of other articles—I think one was written in the *Saturday Evening Post*; I know I wrote an article for one of the newspaper correspondents at Albany some time ago about "Good Housekeeping," and another for the *American Magazine*. There was an article in the *Saturday Evening Post* on the work of Mr. Kjellander in Chicago, and some one wrote a very dignified and proper article in the *Atlantic Monthly* on the work of the Bureau of Standards. Although a lot of that sensationalism is to be deplored, particularly from a scientific standpoint, yet at the same time it had its good effect in arousing popular sentiment. Muckraking articles of that kind you always have to discount about 75 per cent. You know the commission men got theirs about two years ago; saying that the commission men were all crooks, and so it was a good time for Mr. Driscoll to give out that all dealers were crooks. However, that opened the eyes of a lot of people, and in that sense it had its good effect. Of course he did little or no constructive work. His position was changed to that of deputy commissioner of police and a new commissioner of weights and measures was appointed. The present commissioner of weights and measures, I firmly believe, is a man who is going to straighten out the situation in New York City, because he is a man of ability and integrity, and a man who is always in favor of doing constructive work from the bottom up. It is going to take some time, but in the course of two years I think New York City will be as clean in weights and measures as any city in the country, if Mr. Walsh, the present commissioner of weights and measures, remains in the city of New York. Mr. Walsh hoped and expected to be down here to-day, but he telephoned me yesterday that he was very sorry he would not be able to be here.

Throughout the rest of the State every city has shown progress, phenomenal progress, in the last year, and the type of men that are being appointed as local sealers in the counties and cities are of the very highest grade. The old political ward healer and the old fellow who went around and collected his graft is rapidly being eliminated. I think I can safely state that there has never been anywhere a collection of as able men, as local sealers, assembled in one place as we had in Albany last week—all men of the highest caliber—as I say, with two or three of the survivals of the old régime, who are rapidly being displaced. Some of those, of course, it is a slow process to

replace; you simply have to let them go and give them enough rope to hang themselves, and they have very rapidly hung themselves.

Our present governor is a business man and is thoroughly in sympathy with the weights and measures proposition, because he knows that weights and measures is the fundamental basis of all business. One of the neatest talks on weights and measures that I have ever heard was the one that Gov. Dix made to the sealers of weights and measures of the State last week.

Our present law is broad enough to cover the whole of the instrumental side of weights and measures. We can absolutely take care of all the weights and measures as such. What we are going to attempt to do this year, and what we are going to do without any question, is to pass legislation which will regulate the manner of sale of certain commodities—not in any reckless manner, but after due consideration and consultation with all the business interests concerned. I have never taken a step in the matter of weights and measures in the State of New York without consulting the interests concerned. When we brought out our specifications on weights and measures in New York State, and the only specifications for tolerances that have ever been published in the United States, I called on every manufacturers' association in the United States and held a series of six meetings, which were reported stenographically, and based upon that and subsequent correspondence we established our specifications. Now, in connection with our present bill regulating the manner of sale of certain commodities I have consulted every association of retail grocers, a great many individual retail grocers, a number of individual wholesale grocers, the wholesale grocers' association, the commission men, the coopers, the drug interests, and so on, to see how it hits them. In a number of places, of course, you find people that object, and it is simply a matter of finding out why they object. I think that bill will pass without any question.

The work throughout the past year has been rather strenuous because there has been a great deal of interest taken by the people throughout the State, and I have been called upon very frequently to give talks on these subjects. From the first of March to the first of December I made 76 different talks to various organizations. In many of these cases I took the organization as a whole and prepared them to take up the matter themselves. For instance, when I left here last year I went straight to New York to speak at a banquet of the Rainy Day Club. This club is composed of women—600, I think, in number—who are interested, first, in getting every woman to wear short skirts on rainy days. They themselves do not wear them, but they are interested in everybody else wearing them. [Laughter.] They are also interested in many other things, such as the question of feeding babies and giving the poor people what they pay for.

Last January, at my suggestion, they appointed a weights and measures committee and wanted to know how they could do effective work. This weights and measures committee have gone around to the various settlements in New York City and to the various tenement-house districts and given talks on weights and measures, illustrated with that bunch of tin cans and stuff that I had here at the last conference; also with a large series of photographs and charts which I sent them—of course, I could not give them to the club, but I lent them to them indefinitely—and they have been making any number of talks, at least 20. They are going to have another talk Monday night at some church. The first few times I went down there and talked for them and helped them out; the next two or three times I went down there and insisted on these women talking for themselves, and I listened to them and told them what points they should bring out. A great deal of good can be accomplished by a club of that kind by giving talks in the different sections on matters that affect those particular sections. A great deal of that kind of work has been done throughout the whole State.

I have brought with me some copies of my last report and of the previous one. In this last report is embodied the report on the conditions in New York City which opened the eyes of Mayor Gaynor. I will be glad to have you take some of those with you, and I will submit to the stenographer these documents as part of my report.

I do not know that there is anything else that I can say, except that the work in New York State has certainly been of a constructive kind, starting from the bottom up.

I am absolutely opposed at all times to having statutes enacted of the kind that are enacted by a great many of the agricultural departments, which makes the person who has the thing in his possession the one who is guilty. If he can show a guaranty signed by the person higher up, hold the person higher up responsible. That is the kind of legislation we want all the way through. We have had very few prosecutions. In the whole past year we only had about 35 prosecutions. I do not even mention them in my report, because I do not want to emphasize the fact of prosecutions. We want to get at the man higher up in every instance, and although we found a great many people who under the strict letter of the law could have been prosecuted, we waited patiently until we got the man higher up and got him with the goods; because he is the man who is responsible, and that is the only way a weights and measures official or any kind of official is going to get the support and cooperation of the people affected. It is a fair assumption, I think, that at least 95 per cent of the people want to do the right thing, and it is the 5 per cent that are crooks that you want to get after. I think

Mr. Bahrenburg is of the same opinion. It is the 5 per cent of the commission men that he wants to get after; otherwise he would not care for an apple-barrel law at all.

There has been a great deal of correspondence from my office with numerous other States. Wherever possible, as in the case of Vermont, I have helped other States. I had a number of conferences with people in New Jersey in reference to their bill, and I think there is no question that the bill will pass. At least 16 States have written me relative to their bills. Mr. Smith sent me a rough draft of his bill and I went over it and criticised it. I have not seen the final copy of the bill. As to Pennsylvania, I did not know they had a bill until to-day, but it was so good that it did not need any criticism.

I have brought with me some copies of the book of specifications and also instructions to sealers. I will bring up later, under "Tolerances," the question of those specifications, and see if this conference can not adopt those same specifications, because it is primarily of great importance to have uniformity, and we can get the cooperation of all these manufacturers. For instance, the Fairbanks Co., the Buffalo Scale Co., and a number of these other scale companies are living absolutely up to our specifications. It is only necessary to give them a reasonable time to change their forms. The Fairbanks and Buffalo companies are changing all their patterns simply to comply with these specifications, because they see the reasonableness of them. I thank you very much.

Mr. BOYER. I want to say to Dr. Reichmann, and a whole lot of others within the sound of my voice, that they do not need to think they are going to get away without helping Pennsylvania to make laws. What we want to do is to get the thing started. We will have to start at the bottom, with the establishment of the bureau that is provided in the bill that our secretary has before him. It will be the duty of that bureau for at least two years to make investigations. Then at the next session of the legislature the laws will be presented, and I would not be at all surprised if Dr. Reichmann would be called in.

Mr. REICHMANN. Let me add just another word about these magazine articles. It is very desirable to have all these articles appear, but I do think, from a sense of fairness, that it was not proper and not fair to the Bureau of Standards to leave out its name. The only case where its name was mentioned was in an article in the last Metropolitan Magazine which starts out with "Mr. Louis A. Fischer, of Akron, Ohio." [Laughter.] Statements were made in a number of those magazine articles relative to an investigation of the condition of weights and measures by the bureau of municipal research.

The bureau of municipal research of New York City never made an investigation of New York City, and how those writers all got hold of that proposition I don't know.

Mr. BOYER. Dr. Reichmann, they did make another investigation in Philadelphia.

Mr. REICHMANN. Yes; they made an investigation in Philadelphia and made an investigation all throughout New Jersey. Two of my inspectors took their vacation time in making that New Jersey investigation, which was carried on in conjunction with the investigation which the Bureau of Standards made in the western part of New Jersey. They have made a most complete and elaborate report of that investigation, and a most fair report. The municipal research bureau in Philadelphia has been making an investigation also over there, and has been making investigations in other places; but, as I say, they have never made an investigation in New York City.

The CHAIRMAN. So far as the bureau is concerned, we do not feel hurt at all if these articles do not mention us. We try to keep in the background in these matters. I, for one, have never enjoyed popularity of a certain kind. But back of that our effort has always been to put the local official forward and to stand back of him and help him as far as we could, and we feel that the State official and the local officials should have the credit for the work they do. It is largely a local matter. We have always pursued that policy, namely, that we did not want to go into a neighborhood and claim the credit for stirring up an investigation, the credit for which should go to the local authorities. The investigation that we have been conducting has been a very thorough one as far as we have gone. We are perfectly satisfied with it. We have obtained information that we could not have gotten in any other way. Perhaps we have erred on the side of avoiding the States which have already good organizations, but, as I stated last year, we have done that purposely and intentionally, for fear we might be accused of trying to interfere in the local matters.

At this point a recess was taken for luncheon.

SECOND SESSION (AFTERNOON OF FRIDAY, FEBRUARY 17, 1911).

The conference reassembled at 2.30 p. m., Mr. Palmer presiding.

The ACTING CHAIRMAN. The next item on the program is the report from the Bureau of Standards. I will ask Mr. Fischer to report for the bureau.

The SECRETARY. This is the continuation of the reports of the delegates to some extent.

The most important thing we have to report on, I think, is the work done during the year by our inspectors. Since the 1st of July, 1909, up to the present time, the bureau has gone into 33 States and 117 cities. That makes an average of a little less than 4 cities to a State. I do not think I need to enumerate these States, but most of them are in the northern half of the country, although we have made some inspections in some of the Southern States, for instance, Louisiana, Mississippi, Tennessee, and Georgia. The results that we have found there are practically the same as those found in other parts of the country. There are some differences, but, at the same time, the conditions seem to be pretty bad everywhere. We have not investigated any State that could be considered as perfect by any means. The percentages of erroneous scales seem to vary from about 35 up to 60, and I believe in one case as high as 75 per cent.

Our standard for calling a scale erroneous is 3 per cent; that is, half an ounce on the pound.

The results of this work have been furnished to the officials of a number of States on request, and a number of States have been moved to action as a result of the conditions disclosed by our investigations. Other people had a great deal to do with creating interest in the subject, but the results obtained by the bureau have been of inestimable value in creating interest in the States where the investigations have been made. I have already read the list of States that are either considering or have enacted legislation, and I need not do it again.

The bills that have been introduced in these States are practically the same. There, of course, are variations, but in all essentials the bills are similar. Those that were not drafted by the bureau we have had a chance to criticize, and a number of others here have had the same opportunity.

During the year we have also been engaged on a new compilation of State laws. It is an enormous task to get those laws absolutely correct and up to date. The first compilation was used as a basis, but a great many old laws not in the first compilation were discov-

ered, and a great many new laws passed in recent years will have to be included. This volume was practically ready for publication a month or two ago, and would have been in print by this time; but on account of the activity of a number of States, which was to some extent unexpected, we decided to wait until they had finished legislating, or else our volume would be obsolete as soon as it appeared. I think that most of the legislatures will adjourn in a month or so, and then we expect to get the new laws and to include them; so that there is no reason why we should not have this new compilation in a month or two.

We have adopted a somewhat different policy in regard to the information we have obtained in the last six months, especially in the West. There are no State inspectors out there except in North Dakota, and this information that we have obtained has been given a great deal of publicity, partly because the bureau has given the information to the local newspapers, and partly because our inspectors have been asked to advise State and city officials as well as representative bodies of citizens, as to what steps should be taken to correct the bad conditions found. These statements have been copied by the various newspapers and somewhat magnified, and, as a result, we have received a few protests and requests for reports, which have been furnished. They seem to be satisfying to most of the people who get them. Some of the more important facts brought out by our investigation are as follows:

The total number of scales tested at the present time including 269 not classified is 6,648, of which 4,031, or 60.6 per cent, were correct.

Total number of weights tested, 8,210, of which 6,747, or 82.2 per cent, were correct.

Total number of dry measures, 3,681, of which 2,404, or 65.3 per cent, were correct.

Total number of liquid measures, 1,008, of which 754, or 74.8 per cent, were correct.

Spring scales of all kinds, except spring computing scales, 1,892, of which 814, or 43.7 per cent, were correct. This does not make a very good showing for spring scales.

Computing scales of all kinds, 2,253, of which 1,174, or 52.1 per cent, were correct.

All other scales (that includes of course equal-arm scales, counter scales, etc.), 2,234, of which 1,871, or 83.7 per cent, were correct. The percentage of correctness in the equal-arm and ordinary counter scales, you will see, is very much higher.

The total number of stores visited is estimated at about 2,427, and the total number of pieces of apparatus of all kinds tested is about 19,790.

In addition to furnishing copies of the reports of our inspectors, we have carried on an enormous correspondence with all sorts of people, who are interested in the movement, or who have heard of our work in one way or another; and we have, of course, given what information we had and distributed copies of the proceedings of former conferences and other publications on weights and measures.

That, I think, is about all I have to report on the work that has been done. If there are any questions that any one would like to ask, I would be very glad to answer them or have Mr. Holbrook do so.

Mr. BOYER. Mr. Fischer, would you kindly tell me, with reference to the computing scales, what basis you used in estimating the accuracy—the computation or the weighing?

The SECRETARY. The weighing.

Mr. HAND. Mr. Fischer, I would like to ask one question. In testing those scales do you sometimes find them over?

The SECRETARY. Oh, yes.

Mr. HAND. You put that down as incorrect?

The SECRETARY. As incorrect. I can say right now, though, that I think it is safe to say that 80 per cent of those that are incorrect are against the consumer.

Mr. HAND. Now, could you give me a general idea of the percentage of inaccuracy? Would you say 60 per cent of some of these scales were incorrectly graduated?

The SECRETARY. Yes.

Mr. HAND. About what percentage are under weight?

The SECRETARY. I could not give you that at the present time. Most of them, of course, are off 3 per cent, say; a considerable proportion are off between 3 and 6 per cent; and it is not an unusual thing to find them between 3 and 9, and 9 and 12, and we have found some of them beyond that.

Mr. REICHMANN. In other words, counting that New York City report—I believe Mr. Holbrook stated to me that that average came very close to that same percentage.

Mr. HOLBROOK. I do not know about the errors themselves. The general percentage was much the same.

The SECRETARY. Most of them, of course, have the smaller correction, but it is a common thing to go into any of the markets almost anywhere in the country and find these scales half an ounce or an ounce off. That has been my experience in just casually looking at the scales, sometimes with Mr. Connors and sometimes with others; and most of you will have that experience if you look.

Mr. HASKELL. Not in the District of Columbia, Mr. Secretary. If we find a scale that is an ounce or 2 ounces——

The SECRETARY. Two ounces is a little more than you will find, of course.

Mr. HASKELL. No, we do not allow them now. We do not allow anything of that kind at all.

The SECRETARY. I think that is very probable. You understand I am speaking about the States now.

Mr. HASKELL. Yes.

The SECRETARY. But in speaking of single cities, I think, Mr. Austin's city, Detroit, showed the highest percentage that we have found in any large city. I believe we found about 95 per cent of the scales correct. Chicago is very good for a city of its size, but Detroit—

Mr. HOLBROOK. Detroit is 88 per cent.

The SECRETARY. We have all these reports, and we would be glad to show any particular report to any one who is interested.

Mr. GOODWIN. What are the figures for Rhode Island.

The SECRETARY. I could let you look at that report. I do not recall what the percentage was. We have those reports and you will be supplied with them some time. At the present time we are doing everything we can to furnish them to those States that are considering legislation.

The ACTING CHAIRMAN. You have heard the reports of delegates, including the Bureau of Standards. Are there any additions under this head, or remarks that you desire to make? If not, we will pass that.

The next seems to be State weights and measures laws. Had you anything in mind under this head, Mr. Fischer?

The SECRETARY. We have a law that we have been working on that we would like to get the opinions of the delegates on.

Mr. REICHMANN. Mr. Chairman, I move that copies of those laws be furnished to the delegates; that they be asked to read them over carefully and submit their criticisms in writing to the Secretary within 10 days; and that they then be acted upon by the executive committee. I do not think it is feasible to act upon each one of these bills, section by section, now. It would take a long time.

The SECRETARY. It would take a long time; there is no question about that.

Mr. GOODWIN. I second the motion.

Mr. THOMAS. I would like to ask one question, and that is whether the replies that are received in accordance with this motion will be printed and sent to the several delegates. I imagine that most of the delegates in attendance here are more interested in hearing what other people have to say on that topic than they are in talking on it themselves or writing about it. If it seems best to do the work by writing,

then I think we ought to have the benefit of the opinions expressed after we get home.

Mr. REICHMANN. Mr. Chairman, I see no reason why that could not be made an order of business for the next meeting. In the meantime any delegate here who wanted a copy of the law, amended to meet any objections or criticisms, might be supplied with a copy of it, and then at the next meeting we could take up each individual letter. Because practically all of those legislatures which are now in session this year either have introduced their bills or are not going to introduce any, and if they do introduce a new bill they will not have time to introduce it according to the form we propose here. As a matter of fact, in many States it is impossible to do that sort of thing.

Mr. HAND. Mr. Chairman, I believe it would be a very difficult matter to reach a general agreement with regard to this uniform law through correspondence. It would produce an immense amount of detail, and I do not believe anybody is going to take the trouble to consider all these things; whereas if we could make this an order for some time to-morrow, we could all read over this bill to-night, and we could then hear the criticisms of other gentlemen on it, and we would all become more familiar with it, and perhaps we could agree in large measure now. Besides which, the Legislature of the State of Mississippi meets next January, and we would like to have as much information as possible. But if we wait and allow this to come forward in the form of correspondence, we will have a great mass of detail that will never be sifted out, in my opinion.

The SECRETARY. Mr. Chairman, I might say that the experience of the bureau, and I think of every man present, is that when you send a thing around and try to get an opinion on it you don't get much. You do a lot of fishing, but don't really get very many results. That has been our experience; and while I do not care especially about pressing the consideration of this matter, what we are going to do if we do not get the opinion of this body on that is to publish this, anyhow, because there is too much of a demand for it. We can not put it off any longer. We have been furnishing this thing as it is. All these States in the West have got it. Perhaps 15 States are now considering a measure based on this particular bill.

Mr. HASKELL. Mr. Chairman, I think the suggestion of the gentleman from Mississippi is a good one. That will give us an opportunity to look it over to-night and express our opinions on it, and it can be closed up to-morrow.

Mr. GOODWIN. Mr. Chairman, I think that is the proper thing to do—to take the copies of this law and look them over carefully and to thrash this thing out to-morrow. It will not take a great while

to do it. I believe delay is dangerous, and if this is going to be of advantage to us we want to consider it at once.

Mr. REICHMANN. Mr. Chairman, I believe that if every one of the delegates had a copy of this bill, and were instructed to submit his criticisms in writing within the next 10 days, he would do it, if sufficiently interested; and if not sufficiently interested, I do not think his criticism would be worth much. Furthermore, Mr. Chairman, we can judge somewhat from past experience. We have in the proceedings of one of our conferences a proposed model law, and of all the hodgepodge, ill-considered propositions that I ever saw in my life, that bill is it. That was considered in detail, and if I remember correctly it took four hours and a half to go over it.

The SECRETARY. I must say that I take an exception to that statement of Dr. Reichmann. I think that this particular bill, which he has had more or less to do with, embodies practically all those suggestions. They may not be arranged in the best order, but I think the suggestions contained in that bill were almost all of them very good suggestions indeed. I do not think that this particular bill is much of an improvement on it, except in so far as the wording is concerned. As a matter of fact, the things that ought to go into making up a bill have never been brought to the attention of the public before—of those interested, you might say.

Mr. REICHMANN. Mr. Chairman, I withdraw my motion with the consent of my second, and I make another motion to the effect that we do consider this to-morrow.

The motion was seconded.

The ACTING CHAIRMAN. It is moved and seconded that the matter of the consideration of the model State laws be laid over until to-morrow, with the understanding that each delegate will be provided with a copy of the laws for his consideration over night.

The question was taken, and the motion was carried.

The ACTING CHAIRMAN. The next number is shipping containers, a subject in which I know several of the gentlemen present other than the delegates are very much interested. I will have to rely again on Mr. Fischer as to whether he has made any program as to how this discussion shall be conducted.

The SECRETARY. I haven't any special program about that. Has anyone any suggestion to make?

Mr. REICHMANN. Mr. Chairman, there has been introduced in the Legislature of the State of New York a bill which, as I stated this morning, is being considered by the commission men, the retail grocers, the wholesale grocers, and the manufacturers of containers; and I will read that one section which refers to containers:

Where not otherwise provided by statute no person shall manufacture, sell, offer, or expose for sale containers for vegetables, produce, or fruit that are not of the capacity on one barrel, half-barrel, third-barrel, or multiples of the

barrel or submultiples of the bushel divisible by two: *Provided, however*, That fruits, vegetables, and produce may be sold in other-sized containers if the net capacity in terms of measure is plainly and conspicuously marked, branded, or otherwise indicated in the English language on the outside or top thereof, or is marked in accordance with the provisions of section seventeen: *Provided further*, That a barrel within the meaning of this and the ensuing sections of this article shall represent a quantity equal to seven thousand and twenty-six cubic inches or a barrel having the following dimensions: Head diameter, seventeen and one-eighth inches; length of stave, twenty-eight and one-half inches; bilge, not less than sixty-four inches, outside measurement; distance between heads, not less than twenty-six inches; and to be known as a standard barrel: *And provided further*, That a reasonable variation of the capacity specified shall be allowed.

The following section, to which it refers, is a section which provides that when a standard-size container is not used the outside of the container shall be marked with the quantity of the contents, either in terms of weight, measure, or numerical count. That bill establishes a standard barrel of a certain size, and also legalizes the half barrel and the third of a barrel, the third of a barrel corresponding with the apple box used by the Oregon shippers. It also establishes boxes and crates of a bushel or submultiples of a bushel divisible by 2. I think that every fruit growers' association in the United States has practically adopted that sort of barrel. There are, to be sure, a few in those sections where they ship pears who advocate a smaller-sized barrel, and that smaller-sized barrel is always a confusion for every shipper and every receiver of goods; and, furthermore, a barrel bill is applied in nearly all the States to certain commodities only, like apples, pears, or quinces, and sometimes potatoes.

Our present apple-barrel law is absolutely vicious, because it states that the barrel shall have a certain dimension, and if it does not have this dimension it shall be marked with the word "short." If it is marked with the word "short" it is a legal barrel, and you are immune under the law. As a result the shippers mark every barrel "short," and no one except the trade knows all that the word "short" means. Furthermore, they are not marked in a conspicuous manner.

I think, Mr. Chairman, we would like to hear from Mr. Bahrenburg and Mr. Cummings. I have gone over this bill with Mr. Bahrenburg on this same matter. Mr. Bahrenburg has had a great deal of experience in this line with the National League of Commission Merchants, and is right in with Mr. Kimball, the president of that league, and has also had a great deal of experience before Congress on the Lafean bill and some other bills.

The ACTING CHAIRMAN. The conference will be very glad to hear from Mr. Bahrenburg and Mr. Cummings; and it gives me pleasure to ask Mr. Bahrenburg to say a few words on this matter.

Mr. BAHRENBURG. Mr. Chairman, speaking on Mr. Reichmann's bill here, I want to say that it is just what we as commission mer-

chants are looking for—just what we want. In the early part of 1909, here in Washington, there was a conference held of all the different apple interests—growers, consumers, dealers, middlemen, and commission merchants—and at that conference, after considerable discussion, they adopted the standards that Mr. Reichmann calls for in his bill. Speaking for the standard barrel I think that there is absolutely no objection to the barrel for apples, although there is a little objection in regard to pears. But taking it from a practical standpoint, and as a handler of pears and quinces, I personally have always found that this standard barrel was the barrel best adapted for both pears and quinces. The trade take to it better and it is just what is wanted.

I want to say that I am very glad to have had the opportunity to attend this conference and to note the work that has been done up to the present time. I think that we can see where the cooperation of you gentlemen here will result in our getting national legislation; and I think that is what the ultimate aim should be. While we want State legislation, as dealers we want to be protected by Federal laws so that we are not hampered. For instance, if a bill of this kind goes through and another State comes in with a smaller package we are compelled to refuse those goods or else take the consequences of the law. And I can see where cooperation on the part of all you gentlemen will mean that the different States, working together, will remedy this condition of affairs and that we will finally secure Federal legislation.

Mr. GOODWIN. Mr. President, it seems to me that this thing is all wrong. I believe that this thing should be regulated by the National Congress. This should be a universal thing for all the States. When we make independent laws in the different States we are liable to conflict. We do conflict. Even in my neighboring States—Massachusetts and Connecticut—the standards vary from those in use in Rhode Island. Therefore I think that the only proper way to get this thing absolutely right is to have a national law passed by which all of the States shall be governed.

Mr. BAHRENBURG. Mr. Chairman, I want to say here that the National League of Commission Merchants of the United States are heartily in favor of what Mr. Goodwin says. We want national legislation. Of course, as long as there is State legislation coming out, that is just what we are looking for; we certainly can not object to that; but we want national legislation by all means.

Mr. REICHMANN. Mr. Chairman, I would like to call Mr. Goodwin's attention to the fact that of course it would be an ideal proposition if we could get national legislation to govern all these things, so that we could ship to the Fiji Islands, if necessary, and always use the same container; but you are never going to get Federal legis-

lation until you get some State legislation first. Make your State legislation right and your Federal legislation is going to follow. The whole history of legislation will bear out that statement. You can not start with Federal legislation and follow with State legislation.

Mr. GOODWIN. Mr. President, I believe it is within the province of every delegate here to go before the legislature of his State, and go to his representative in National Congress and take this matter up at both ends and thrash it out and get the result that we desire—that is, a universal law to govern all the States alike. I believe that I can do it, and if I can do it, in my humble position, I believe others can do it.

Mr. REICHMANN. I think Mr. Goodwin is just right. I think all of us appreciated seeing Mr. Goodwin down here in Washington at that committee meeting when they discussed that net-content-of-container law.

The ACTING CHAIRMAN. I take a great deal of pleasure now in presenting one of the citizens of my own State, a man who I know has done a great deal of work on standard packages for food, etc., and I will ask you to listen for a few minutes to Mr. Cummings, of Boston.

Mr. CUMMINGS. Mr. Chairman and gentlemen, I fully agree with Mr. Goodwin. I think I have national legislation as much at heart as any one here, and I believe that is the only solution. But I feel with Dr. Reichmann that it must be based on State laws in a way. I think Dr. Reichmann has done more work in getting this bill formulated in the right way than any other man in the United States. He has got the opinion of more people and more practical people than almost any one could, except one in his position and with his energy. And I will assure Mr. Goodwin on another point, as a member of the committee of which Mr. Bahrenburg is chairman, that we are instructed to prepare a bill for national regulation on these very lines—that is, for control of the barrel and box proposition—and we have both been in touch with Dr. Reichmann in preparing this bill.

There are some things which I would like to ask Dr. Reichmann. For instance, under the wording of that section, would it not allow the stricken bushel to be used in place of the third of a barrel?

Mr. REICHMANN. Yes, that is true. Perhaps it would be better to cut out that bushel altogether and simply say "submultiples of the bushel divisible by 2." I would simply say "that are not of the capacity of a barrel, one-half barrel, one-third barrel, or multiples of the barrel or submultiples of the bushel divisible by 2." That would eliminate, of course, the 2,200-inch bushel crate.

Mr. CUMMINGS. And it would also, interpreted in that way, prevent the 67.20-cubic-inch box; it would bring it up to 70.26?

Mr. REICHMANN. No, no; absolutely not. It would retain that 67.20-cubic-inch box. Following your suggestion we simply cut out that word "bushel" and substitute "one-third barrel." We eliminate the bushel crate; that is, what would be used for a bushel crate would be one-third of a barrel, and that is what everybody wants. Every retailer gives short weight every day simply for the reason that he assumes that a barrel is 3 bushels.

Mr. CUMMINGS. Now, there is another point, and that is the guaranty which is handed down from the manufacturer through the commission man, or jobber, to the retailer. I can not in my own mind see how that will work out to any great advantage, especially in interstate shipments. If that can be embodied in a national law, thereby regulating interstate shipments and the marking of the capacity of the package by the manufacturer, it will serve its great purpose. On intrastate shipments it does not particularly matter, but I do not see how a State regulation can embody that clause with any great degree of safety.

Mr. REICHMANN. You notice the way that is worded there; it only takes in those that are within the State—the manufacturer, jobber, or seller in the State. We go as far back as we can within the State; our police power does not extend beyond the State. Assume that this bill became a law, and you received from a manufacturer in the State of New York some goods that were not marked within the provisions of this act. Your State could not touch it, you see; but you or your State officer could notify me, and it would be my duty as a State officer to investigate that case in my State. Then, if I found that shipper sending the stuff out, I could easily reach him. In other words, our first duty is to protect those in our own State, and then we take care of our neighbors.

Mr. GOODWIN. How would you apply the law to people who send small or short measure commodities into his State?

Mr. REICHMANN. We can reach them very simply, very easily. Take for another concrete example a man sending some potatoes in a barrel outside of the legal standard of barrel. Suppose that dealer buys that barrel from a commission man. Under one of the provisions of this law he will get a guaranty from that commission man that those are marked within the meaning of the act. Now, the commission man, if he has bought them from outside the State—we can not get the man outside of the State, but we can get the commission man that sold it to him—that commission man, knowing that this is the law, is going to make the man from whom he buys the goods ship them to him in standard-size crates or else he won't buy them; and the commission man will send them, for the very simple reason

that he can not cut out the market. Now, the Norfolk people, on that potato proposition, wrote me a letter and said: "If you don't want to take our barrels we will cut out the New York market." I wrote them: "Thank God; I am glad you will." Then they wrote a polite letter and said: "We can't cut out the New York market; we will comply with the provisions of your law."

It is certainly within the police power of every State to establish its own regulations irrespective of what the Federal law may be. But if you want to get a uniform Federal law, the thing to do is to get uniform legislation among some of the large States, and then you will get the Federal legislation; and you will never get it the other way. I think that is the experience of all legislation.

Mr. GOODWIN. I was going to suggest that I think it would be a good idea to let the great State of New York take this matter up at the present time and try to formulate this legislation. I think it would be an entering wedge and a good lever to use in the interest of all the States hereafter. How would that suit the gentleman from Ohio?

Mr. MARONEY. Mr. Chairman, may I ask a few questions, if you please?

The ACTING CHAIRMAN. If Mr. Goodwin will give way.

Mr. GOODWIN. Certainly.

Mr. MARONEY. How would you bring in poultry and eggs—by net weight or numerical contents?

Mr. REICHMANN. We are talking about the whole bill now. We started with a discussion of the standard barrel. That bill reads "no person shall manufacture, sell, or offer or expose for sale containers for vegetables, produce or fruit," etc. Poultry and eggs would hardly come under the head of produce, fruit, or vegetables. Now, under another provision of this same bill poultry would have to be marked either in terms of weight or numerical count; and advisedly so. It would have to be numerical count in that case; you can't sell poultry by weight.

Mr. MARONEY. You can't?

Mr. REICHMANN. No, sir; because people buy a pair of squabs or a pair of spring chickens, or two or three, or one. But if the person wants it weighed, then weigh it for him.

Mr. MARONEY. That is just what I am getting at. Does the same case hold good in eggs?

Mr. REICHMANN. Certainly. All eggs to-day are graded and bought at wholesale by weight, as every commission man will tell you—gross weight, unfortunately. Practically all eggs sold in crates are sold by weight and they are graded by weight. Then when they are sold at retail they are sold by numerical count, very properly.

Mr. MARONEY. Let me ask another question: Do you think it would be constitutional or held good in law if I should agree to buy from you a quantity of goods, such as a pile of stone or a pile of apples or a pile of potatoes? Do you think that anybody can stop us, or any laws that you make?

Mr. REICHMANN. Absolutely not. You can never pass a law to violate the right of contract. But at the same time the question of its constitutionality is not a matter for us but for the courts to decide. We have no right to discuss that. We do not care whether it is constitutional or not. When we draw that bill and that bill is passed and receives the consideration of the governor and becomes a law, then we can find out whether it is constitutional, and the only way that you can find out is to try a case under it and carry it up to the highest courts.

Mr. MARONEY. That is just what I am getting at. This same proposition came up to me a short time ago. As you probably know, the city where I live makes 95 per cent of the cartons made in this country. I put this carton proposition up to a friend of mine who is a professor in the Yale Law School. He said, "There isn't any court in this or any other country that will declare any law constitutional that prohibits the buyer and seller from dealing in any known commodity as to pile or quantity."

Mr. REICHMANN. In my State, for instance, if it is an agreement made between you and me, and if it is less than \$50, and you take the case up to the court, it is simply a matter of veracity between you and me. If it is more than \$50, under the Code of Civil Procedure that agreement must be in writing. That, of course, varies with every individual State.

Mr. MARONEY. That was one of the things that I had incorporated in the local ordinance that went into effect in my city this week, which says that all goods shall be sold by Winchester bushel or avoirdupois pound, except by special agreement.

Mr. REICHMANN. That is all right.

Mr. MARONEY. That covers it.

Mr. REICHMANN. Only that it is not necessary to add "by special agreement," because that is always understood.

Mr. MARONEY. Well, it covers it in the constitutional part of this law by saying—

Mr. REICHMANN. It does not affect it in the least. The only thing is the point we had in this bill here; Mr. Bahrenburg called attention to it. The only thing it does is to call the attention of the fellow who wants to make the agreement to the fact that he can do it.

Mr. MARONEY. I do not know anything about it myself, but I got this advice from a very learned man in the Yale Law School, who said that by putting "except by special agreement" in there you

covered the constitutional part of the agreement between you and me as individuals. In other words, if I went to you I could dicker with you for a certain pile, but if I went to you and said, "Give me a quart of this" or "a pound of that" or "a barrel of that"—a barrel of potatoes for instance, which in my State is 172 pounds—I had to get that 172 pounds; but if I went to you and said, "I will take that barrel of potatoes or that lump of potatoes and pay so much," you and I could make that special agreement and it would be allowable. There is no law to prevent it.

Mr. CUMMINGS. I want to ask one question right on that line. It has been a contention in Massachusetts for some time that no sealer had any right to come down and claim that we sold a short box; that we did not sell it by the quart; we sold it by the box, and under that clause which the gentleman from Connecticut has spoken of, that might be sold as a box without any difficulty whatever and no prosecution would take place.

Mr. REICHMANN. That is all right unless there is a specific provision in the law which says that that box shall be a quart, and so on. In that case it does come within the police power of the State, because there is a berry-box law. I asked the opinion of the attorney general on that point, and he gave me a long opinion, substantiated by any number of judicial decisions—for instance, in the matter of the sale of vinegar, and similar instances. As soon as the State provides what the established standard shall be, then if the man sells it as a box, that box must be of a certain size because the law says it shall.

Mr. CUMMINGS. Then that applies to the barrel of potatoes?

Mr. REICHMANN. Exactly the same.

Mr. MARONEY. I do not think my friend Cummings heard what I said—that the local ordinance had taken care of it. All goods must be sold by avoirdupois or Winchester bushel except by special agreement.

Mr. CUMMINGS. I understand; the special agreement covers the sale of one barrel of potatoes.

Mr. MARONEY. It covers anything, if we want to buy anything in a lump sum. If I ask for a barrel of potatoes from you direct there must be 172 pounds in that barrel, but if I ask for the quantity of potatoes that is in the case or barrel you and I have a right to make that special agreement.

Mr. MCINTYRE. Dr. Reichmann, is it the intention of that law to prescribe the size of the package for interstate shipments?

Mr. REICHMANN. Certainly; "any person that sells or offers for sale"; and that has been held in a number of cases. For instance, we had a case in the State of New York which was carried to the court of appeals, on the matter of the sale of some vinegar which was

manufactured in the State of New York and was sent to the State of Michigan. The quality of that vinegar violated the State pure-food law. The man was prosecuted and the case was carried up to the court of appeals. The court of appeals held that it was within the police power of the State to regulate how everything should be sold in the State. You know the Supreme Court has practically upheld the contention that the State has police power to regulate the price of commodities if it wants to. That was the case with the 80-cent gas bill in New York City.

Mr. MCINTYRE. I was wondering if that objection had been raised.

Mr. REICHMANN. Yes; I fortified myself on that objection by an opinion from the attorney general.

Mr. MCINTYRE. Perhaps you have on the other one. You stated that if a commission man imported goods from another State in small-sized barrels and sold them you could come back on the commission man. Where he has sold them in the same package in which he imported them?

Mr. REICHMANN. Yes. I could come back on the commission man.

Mr. MCINTYRE. The original package?

Mr. REICHMANN. Yes; that does not make any difference as soon as he offers it for sale in the State, you see. We can not stop his receiving it, but we can prevent him from selling it.

Mr. MCINTYRE. There is a grave question with reference to original packages which we have met in Wisconsin.

Mr. REICHMANN. I think that case has been covered in a number of very similar cases in the court of appeals in our State. I do not know whether the matter has ever been carried to the United States Supreme Court or not.

Mr. MCINTYRE. There are a large number of United States decisions, very strong decisions, which have never been overruled so far as I know. That is one of the difficulties we are up against in trying to bring in such a law—those decisions upon original packages in interstate commerce.

Mr. THOMAS. We have had some experience in Ohio with this constitutional question, and I went to the attorney general of Ohio in my capacity as State sealer and raised the question with him. He said that you can not prevent the sale of commodities in any sort of package without prescribing a general law such as this now before us, because if you attempt to do so you violate the constitutional provision of freedom of contract—a ruling that is contrary to the opinion which Mr. Reichmann said he had received from his attorney general. But he also said that you can get around that difficulty in a very simple way, namely, if you have your law worded in such a way as to throw it distinctly under the police power of the State. For instance, it would be perfectly lawful for the State to pass a bill

providing that "in order to prevent misunderstanding, fraud, or deceit in the purchase or sale of articles of food"—you can make it go further than that, of course, but articles of food are under consideration—"it shall be unlawful to sell articles for human food in any other way than in packages which are of standard weight or measure." That was given by the attorney general of Ohio, who stands pretty well in the legal fraternity.

There is another question I want to raise here in connection with the general proposition in this law, and I am concerned principally in the proposition—for such it comes to—to get eventually a United States law containing such provisions as those in this bill. In Ohio at present there is a bill pending before the legislature which has been talked of for some two or three years—it is prepared and presented and backed by the retail grocers' association of the State and has also the support of a commission merchants' organization—providing that articles for human food shall be sold only by weight, and enumerating certain things. The bill is not a perfect one, but the main provision which is aimed at is the securing of the sale of food commodities by weight, except in case of a few commodities which can not very well be handled by weighing without damage to the commodities themselves, such as the soft fruits, which are damaged by too much rehandling. That method of sale is now in force in some of the cities of Ohio on the initiative of the grocers themselves. We have been told in previous conferences that that rule also applies in the far West, and it applies—I can not name the localities just at the moment—at places between the extreme West and Ohio. It prevails to my personal knowledge in certain parts of the East. One great good that is secured by sale in that way is the preventing of what I believe to be the most frequent sort of fraud in the handling of foodstuffs, namely, the sale of vegetables and some other commodities in the markets of the cities. I know that in our own city, Columbus, where a pretty efficient inspection of weights and measures, under the circumstances controlling, is in force, I have seen, myself, in the markets measures which have been tested and sealed by the city sealer of weights and measures, presumably filled, but really not half filled. Dr. Reichmann has shown us here some fraudulent measures and methods which would be impossible in the selling of such commodities by weight; and personally I am inclined to feel that that really is the best method to secure the interests of the purchaser. Now, I would like to see our discussion broadened a bit, and see whether other representatives here present have not some experience or at least some views upon that subject. This bill, if it becomes a law, will not prevent that class of fraud in the markets to which I allude—the designedly improper use of a proper standard measure.

Mr. REICHMANN. I would like to say for Mr. Thomas's information that that is only one section of the bill. We specify in that bill certain commodities which must be sold by weight. I was just bringing up the question of containers because that was the subject that was on the program.

Mr. CUMMINGS. Speaking of retailing, I would like to ask of Dr. Reichmann if he considers that this one-third of a barrel, making a box of 2,342 cubic inches, and the multiples of it, will apply to the retailing of all commodities, and define specifically the term "heaped measure"?

Mr. REICHMANN. No; this will apply only to containers, it does not specify anything about heaped measure. We are encouraging the people to sell at retail by weight. It is an impossibility to sell at wholesale by weight altogether, on account of the difficulties engendered by the way in which the commodities are grown, and all that sort of thing. But a retailer who starts to sell by weight never goes back to selling by measure. We have any number of cities in the State of New York where I have consistently encouraged the men to sell by weight, and they will never go back to selling by measure.

Mr. CUMMINGS. We all know that the ultimate end of the package is in the hands of the retailer, where it is distributed to the consumer. One of the greatest troubles we have had in Massachusetts has been through the retailers selling stricken measures, and we have never been cursed with the term "heaped measure" so far. Mr. Palmer has a bill before the legislature now compelling the retailing of all goods by weight, as weight is specified on our statute books, which is 60 pounds of potatoes, for example. Therefore, if a man sells a peck of potatoes it has got to contain 13 pounds. That specifies what "heaped measure" means, and to my mind is the only way in which sale by weight can be applied to the retailer. I believe in that thoroughly, although there is one amendment to which I am obliged to call Mr. Palmer's attention, and that is that we have apples, pears, peaches, and quinces designated by weight on our statute books, which would prevent their sale by numerical count; and of course that has got to be embodied in this bill of Mr. Palmer's.

Mr. REICHMANN. Do you not also specify that the weight per bushel of pears is the same as that of apples—48 pounds?

Mr. CUMMINGS. Fifty-eight in pears, 48 in apples. Now, there is a matter in connection with our weights which has got to be gone through and revised, because we all know, who handle apples, that a bushel of large Kings, Ben Davis, or Alexanders, or any large apples will weigh not over 35 pounds, whereas Baldwins, being a solid, heavy apple, will weigh 48, a tolerance is allowed for. The word "tolerance" is all right; I never could object to it at all where applied

under the jurisdiction of the sealer of weights and measures. I object to tolerance when allowed to the manufacturer. Applied to the manufacturer of strawberry baskets it results in the producer or the speculator requiring his baskets to be made of smaller capacity. It is the same in barrels; it is the same in any container where tolerance is allowed, except when it is in the hands of the sealer of weights and measures, who is presumably a just man, a man of good judgment, and who knows where fraud is intended and where deceit is not practiced. It is a simple matter for him, but if it is allowed to the manufacturer I do not believe in it.

Mr. AUSTIN. Copies of these laws, as I understand it, are to be presented for passage to the various States?

Mr. REICHMANN. Yes.

Mr. AUSTIN. If it should not obtain that result and different laws should be enacted in different States, would there not be serious confusion in trade regulations between different States?

Mr. REICHMANN. There is now; and the more confusion there is the sooner you are going to get a national law.

Mr. Chairman, I move that it is the sense of this conference that it is necessary to establish certain uniform standards for containers for various commodities that enter into trade where such commodities are sold in containers.

Mr. AUSTIN. I support that motion.

The ACTING CHAIRMAN. Is there anything to be said on the question?

Mr. GOODWIN. Mr. President, I think that a resolution of that character passed the last conference a year ago.

Mr. REICHMANN. We passed a resolution last year favoring the McKinley bill.

Mr. GOODWIN. It was, practically speaking, to the same effect as the resolution just offered. Now, has our executive committee done anything in regard to this matter? It was left in their hands. As I understand it, it was the sense of this meeting, of the delegates here assembled, that a bill of that character should be introduced in the National Congress to govern this subject. I believe they should introduce it at the proper time and place and see if we can have some national legislation passed regarding this matter. I want to call the attention of the delegates here present to that fact—that there was a resolution of that character introduced here.

The SECRETARY. As a matter of fact, I have no other information to give than what was given this morning. Reports of the various committees were called for and they were given. There was a special committee appointed to draw up that bill, and nothing was done about it; but it is easy enough to adopt resolutions, of course.

Mr. GOODWIN. What is the use of making resolutions on these subjects if they are not going to be carried out?

The ACTING CHAIRMAN. We have one other man; that is Mr. Wescott, a man who is very familiar with this subject, and I know that he can tell us briefly something that will be of interest.

Mr. WESCOTT. Mr. Chairman and gentlemen, I represent a co-operative association of about 3,000 producers of Irish and sweet potatoes. They market their product exclusively in truck barrels with burlap heads. Our interest in this matter, primarily and very highly, is for uniformity. We market our product in perhaps 40 States, and at present, owing to the newly awakened interest in the subject and the agitation in a great many States, we find ourselves up against a very difficult situation. We aim to meet the requirements of each State into which we ship. We have had within the last month or so, at the general offices of our association, two meetings of perhaps 50 of the local manufacturers of barrels. Those gentlemen have attempted to find a common ground on which the requirements of the several States, some prescribing a fixed weight and others a fixed standard of cubical contents, could be met; and, of course, it is a practical impossibility, except by the adoption of a maximum standard which would meet the requirements of the strictest State and exceed those of the other States. Of course, all that is extremely inconvenient, expensive, and wasteful for us. We earnestly hope that uniformity, by agreement in State legislation and, if possible, now or later, by some Federal enactment, at least so far as interstate commerce goes, will be attained.

There have been one or two suggestions made as to which, I think, our experience as producers of these commodities may be suggestive.

First, with reference to making the weight of the package the standard, making the requirement a weight requirement. Of course, the advisability, perhaps the absolute need, of a weight requirement is obvious in the case of the retailer, who sells in a small package which is very easily stacked. For the producer, however, who sells his goods in a barrel, a little reflection will show that that reason for a weight requirement does not exist. The barrel is too large a receptacle to be stacked; and if it could be stacked at the shipping point, the stacking would soon get shaken down in transit. So that the necessity for a weight requirement, I think, does not apply in the case of the barrel as it is filled by the producer.

Now, there are very serious practical objections from the standpoint of the producer to a weight requirement in prescribing a minimum barrel. In the first place, if the contents of the barrel must be weighed, you impose, theoretically at least, upon the farmer the necessity of providing himself with scales to weigh the contents of the barrel; while if you make your requirement one for cubical con-

tents, for capacity—and that is what we very earnestly hope to see adopted—the package itself becomes a measure. The burden is thrown on the manufacturer of the barrel, who need only at the beginning of the season see that he complies with the rule, and the farmer who probably fills and shakes down his package can be assured that he is on the safe side of the law.

Another consideration in that connection is that a weight requirement makes for diversity and confusion in State laws. We find at the present time considerable difference in the requirements of the various States which have adopted a weight rather than a capacity standard; and then, too, the necessity for a different weight for each different commodity brings in an element of confusion as between different commodities. A package of sufficient size to meet the weight requirement on Irish potatoes, for instance, may be too large or too small for the weight requirement on sweet potatoes, whereas if you make your capacity—

Mr. THOMAS. Mr. Chairman, may I interrupt? Mr. Wescott, I think, was referring to remarks I made. He is under a misapprehension. The proposition in Ohio is not to require a barrel to contain so many pounds of potatoes, but that the sale shall be done by weight, so that whether the barrel is full or not, whether it contains one commodity or another, the purchaser shall receive so many pounds. In the Columbus markets, in the wholesale and in the retail trade, chickens are sold entirely by the pound.

Mr. WESCOTT. I believe that in the copy of the suggested model for uniform State legislation, as it has been distributed, the cubical contents of a barrel of the suggested dimensions is not given. I understand that the equivalent in cubic inches of a barrel of the dimensions prescribed is 7,026 cubic inches. I think it would be extremely beneficial if all these copies that are in circulation could be amended by the insertion of the equivalent which Dr. Reichmann gave in his reading of the copy which he has, because varying local conditions will make it necessary, I think, for a great many sections to depart from the exact dimensions suggested there while retaining the same holding capacity. In my own section, for instance, the barrel is manufactured from rather a cheap grade of pine timber, and the elasticity of that material is not sufficient to give a bulge to the barrel that the dimensions there require. In other words, our manufacturers would have to make a straighter barrel, with a larger head, to get the same holding capacity. It would, I think, very greatly facilitate compliance with the law, and make it a very much easier matter for the barrel manufacturer, if the capacity of the package in dry quarts or cubic inches were stated in the statute.

I thank you very much, gentlemen, for your attention.

Mr. GOODWIN. Mr. President, may I ask a question? Provided there was a Federal law, would it not be necessary also to state the weights per barrel of the different commodities?

Mr. REICHMANN. No.

Mr. WESCOTT. I think that would introduce a very great element of confusion. We find that our products vary in weight according to the season or the weather.

Mr. GOODWIN. We know they do; we know that Irish and sweet potatoes vary in weight, and the sweet potatoes are sold by weight exclusively in our markets. Now, if that is the case, and they were bought by the barrel and sold by weight, would it not be a hardship on the buyer or the seller, one way or the other? Would not one or the other be selling at a loss, or buying at a loss, as the case might be? I have inquired in New York, Massachusetts, and in my own State, and retailers are selling sweet potatoes by the pound. Now, if they buy them in bulk and do not get their weight, they are selling at a loss, naturally.

Mr. BAHRENBURG. I would like to say one word here, Mr. Chairman. Take the potato proposition, where there are a million barrels of potatoes or more handled by the people that Mr. Wescott represents, and as many by the people that Prof. Johnson represents—Prof. Johnson's people are on the Norfolk side and Mr. Westcott's are on the Eastern Shore side—there are conditions, especially weather conditions, which affect potatoes very materially. For instance, if it is rainy to-day, potatoes will be much heavier than they will be to-morrow, when the sun is shining and it is dry. Another thing: The man that is putting up potatoes can hardly weigh these potatoes on the farm where the wet dirt is around them at the time. The retailer who is buying these potatoes can draw his own conclusions when he is buying them as to whether the potatoes are wet or dry, and how much moisture there is in them. He is there to guide himself. He can judge for himself how much shrinkage there will be there on account of dirt or moisture.

Mr. REICHMANN. Mr. Chairman, the matter of specifying exactly the size of the barrel, and exactly what a barrel of each commodity shall weigh, introduces an inconsistent set of specifications, and to regulate that matter I think we should address the Lord in our prayers rather than expect it to be decided by the legislature.

The ACTING CHAIRMAN. I know that we all appreciate having these gentlemen who represent the growers with us, because they have given us very valuable information on this matter. I find that we have two more whom we will be very glad to hear from. I will ask Prof. Johnson, of the Agricultural College of Virginia, if he has anything that he wishes to add on the subject.

Mr. JOHNSON. Mr. President and gentlemen, all I wish to say is that what Mr. Wescott has stated in regard to selling potatoes by weight is extremely important to the growers in the southern section of the country especially. In addition to selling potatoes, we sell in the Norfolk region kale, spinach, cabbage, and other commodities of that kind which are harvested and put into those barrels. Now, we have found by actual experiment that we can vary the weight of a barrel of cabbage from 10 to 15 or 20 per cent, depending upon the weather conditions when we cut that cabbage. We can make the same variation in a barrel of spinach or in a barrel of kale. For that reason it is obviously improper for us to try to sell these commodities in a wholesale way by weight, whereas we are perfectly willing and anxious to have a uniform barrel. In the Norfolk region, as in Mr. Wescott's region, we pack those barrels for shipping all over the country. To give a concrete example: We go to Baltimore and we find one set of specifications for barrels; we go to New York and find another specification for barrels; we go to Massachusetts and we find still a third specification for barrels. Now, the question comes up with us, What kind of a barrel are we to pack in our fields when we are harvesting that crop to fit the conditions in those three States, to which we ship hundreds of thousands of barrels? It is really a hardship on those people. Now, those people are not complaining so much about the size of the barrel, but it is the uniformity that they want; and if this organization, or some other organization, can get the Federal authorities to see the importance of enacting some legislation that will enable them to pack a uniform barrel, then I think the object will be accomplished.

The ACTING CHAIRMAN. We would like to hear from Mr. East, who, I believe, represents the Farmers Manufacturing Co.

Mr. EAST. Mr. Chairman and gentlemen, I can only start my talk from a manufacturer's standpoint. I just want to say that the growers' and manufacturers' interests are identified. What we both need and what we both desire is a uniform package. The size is what we want to regulate. I think that the question of weight would mix matters up and make it very difficult and very objectionable all around. What we do want is a uniform standard package down the line, from the berry box to the barrel. I just want to say that Dr. Reichmann was the one that got warm on the trail of all the berry-box manufacturers, and I do not think he has much trouble with them now. The barrel also has been improved the last year. The manufacturers have been getting rid of the old product and have adopted a universal standard. Now, whether it measures up to the standard as defined in this bill I do not know,

but it holds and will carry a little more than the previous barrel used on the eastern shore by the Produce Exchange; I can say that. I have read over the bill coming from Dr. Reichmann, of New York, and I think that will come nearer to filling the requirements of all concerned than anything else that you can get up, and if the Empire State of New York can adopt that as a standard package down the line there will be no trouble with national legislation. We can just take that as a model for all the States in the Union.

Mr. REICHMANN. The motion was that it is the sense of this conference that it is necessary to have uniform sizes of standard containers for shipping commodities.

The question was taken, and the motion was carried.

Mr. BAHRENBURG. Mr. Chairman, speaking for the four gentlemen who have appeared, I wish to thank you for the opportunity of having been with you here and listening to what has taken place. And speaking as the chairman of the committee on standards for the National League of Commission Merchants of the United States, as a member of the legislative committee of the International Apple Shippers' Association, and as a member of the legislative committee of the conference held here in Washington in 1907 (the result of this conference being the Lafean bill, which is in the hands of the Agricultural Committee at the present time), I wish to say that we will heartily cooperate with you in any work that is done with reference to the motion that has just been passed. [Applause.]

The ACTING CHAIRMAN. I just want to say that I trust the trade organizations themselves will become active in this thing and take the initiative, and let us weights and measures officials follow along with you. I think it will be much more effective if the trade associations such as you represent—the growers, manufacturers, etc.—will come forward to Congress and say: "We want this"; and without intending any criticism whatever I would suggest that the matter, if it is brought in a different form, or a new form, be referred to the Committee on Coinage, Weights, and Measures, rather than the Committee on Agriculture. The Committee on Coinage, Weights, and Measures is one which we keep a little closer in touch with, and if the association has any influence at all I think we can exert it there to better advantage than we can in the Agricultural Committee. Also, the Agricultural Committee is a particularly busy committee, and has a large variety of things to consider, and the Committee on Coinage, Weights, and Measures probably has not so many; and therefore the bill would be given earlier and, I believe, better consideration than if it went to the Agricultural Committee. If the trade interests who are affected by this legislation come forward and make a united demand for this thing, it is a great deal better than if the State officers asked for it, because, while we do everything we

can, we are accused sometimes of being cranks and having our hobbies, etc. And as I say, I think if the trade interests ask for these things first, every weights and measures man in the country will be right there with you and will help you to push the ball along.

Mr. BAHRENBURG. Mr. Chairman, I just want to take issue with you on that. I do not think you are valuing your own influence highly enough. I think it is just the contrary—that if a movement were started by you gentlemen here in your convention, the committee, knowing that you are in a position to act wisely on a move of this kind, would carry more weight from being furthered by you and backed by your association.

I also wish to state on the part of Mr. Johnson and, I think, Mr. Westcott, that their organizations also will cooperate with you in this movement.

Mr. WESTCOTT. I wish to indorse that statement, Mr. President, and I think possibly it might be at some time of some practical value if the name of the Eastern Shore Virginia Produce Exchange, of Onley, Va., were included in the minutes as a permanent ally in any cooperative movement to get uniformity and satisfactory standards as to these containers.

The SECRETARY. Mr. Chairman and gentlemen, I want to emphasize just what Mr. Palmer has said. While we are treated with every courtesy at the Capitol Congress is very much more apt to act if you gentlemen get after them. You are their constituents, and they are very much more apt to listen to what you say than to what some official says. What they want to hear is what the man who is actually losing money, or having a great deal of trouble in dealing with a situation, has to say about it. Take, for example, the committee that considered this net-weight container bill not long ago. We could not get any action out of them until the packers and grocerymen got interested in the subject. They had a very large meeting at the Capitol, and it was entirely because these associations had interested their members and members of the committee in the matter. We can do a good deal, but you must not think that we can do everything.

Mr. REICHMANN. Mr. Chairman, I had intended to make a few remarks along that line later on, and I do not know but what it may be just as well to mention a part of them right here.

I do not believe that this conference is going to do anything about that matter. The great trouble is that there are a great many commercial organizations that are working for a certain thing, but they are not all cooperating; and neither this conference nor any place in the United States to-day is a clearing house where you can go for information or cooperation. What we ought to do, in my opinion, if we are ever going to be effective, instead of coming here year after

year, sitting down and listening, and having lunch, and going home again and forgetting about it, is to have an association (and this conference ought to be the nucleus of it) with a head office (and the proper place for it is right in New York City), with a paid secretary, whose duty it shall be to gather together all the weights and measures laws, information as to pending bills, etc., so that whenever the apple growers, or the drug interests, or any other organizations or individuals want to find out what is being done they can go there and get it right off the reel. The Bureau of Standards can never become a clearing house of that sort; and no governmental office, either State, city, or Federal, can ever become a clearing house of that sort. As a matter of fact, the secretary of this conference would not have time to do it, because the work would be purely incidental to his official duties. It ought to be his main business—and that is exactly what I am driving at—to form a weights and measures association, and get parties to put up enough money, so that we can have a secretary whose business it is to keep a record of those things; and if I want a record of the people interested in this thing, he can give it to me, and if necessary send out the correspondence. If I want to get a list of the sealers of weights and measures in the United States, where can I get it? Nowhere. There is not a place. I can not get it at the Bureau of Standards. The only thing I can do is to send a letter to every city and find out who the sealer is. I ought to have some place where I can go and say, "Give me a list of the sealers of weights and measures." If I want to get the commercial organizations interested in weights and measures, I ought to be able to go to that secretary and say, "Give me a list of such organizations and of their secretaries."

I wrote the secretary of the League of Commission Merchants, Mr. Hanley, who used to be in Buffalo. Mr. Hanley had long been out of business, and they had a new secretary. The letter went to Chicago and New Orleans and finally went to Mr. French's office. I wrote to the secretary of the Retail Grocers' Association, Mr. Tuttle, and after three months I got a letter saying, "Mr. Tuttle is now the agent for shredded-wheat biscuits in New York." If you had a secretary to keep track of all that business you would know where you were at; and this conference is never going to do anything, nor will the commercial organizations do anything, until they get together and have some central bureau. I do not care what you call it—Central Weights and Measures Association, or Conference of Weights and Measures, or what you wish—but if you do not have an effective office, whose primary business it is to give information, you are never going to get results.

Now, I do not know whether these gentlemen from the commercial organizations agree with me or not, but I believe they will; and I

believe it would be a benefit to every commercial organization. Certainly it would be a benefit to every official; it does not make any difference whether he is a weights and measures official or an official interested in some related or allied subject. That sort of bureau could be spread out, no doubt, to take in more and more subjects if necessary, and it would be extremely important; and I say that the office of the association should not be located in Washington, but should be preferably located in New York, because there you have the centralization of more interests than in any other place.

The SECRETARY. Mr. Chairman, I beg to differ with Dr. Reichmann on a good many statements he has made. The pure-food bill was a bill that encountered a great deal more opposition than anything we are attempting to have passed by Congress, and those interested in the passage of that act did not require an office in New York or anywhere else. The various interests concerned were brought together right here in Washington by the Bureau of Chemistry.

Mr. HAND. It seems to me that we are consuming a great deal of time on this matter. I believe all of us recognize the fact that as long as this subject is before the American people the Bureau of Standards will bear a relation toward the administration of weights and measures in the United States comparable to that now maintained by the Bureau of Chemistry toward pure food, and that after awhile, as Dr. Stratton said this morning, this association will consider technical matters very largely, and that this should be, and will be. Of necessity the bureau will be the source and fountainhead of all information pertaining to weights and measures in this country. I believe that this matter is receiving more attention than, as a matter of fact, it really deserves. What we are after, as I understand Dr. Reichmann, is to receive the cooperation of these people; that is, we want their ideas and all that. But, as a matter of fact, the Bureau of Standards—and I agree with Mr. Fischer thoroughly—will remain, by virtue of circumstances, the center of information pertaining to weights and measures in this country.

Mr. REICHMANN. If I, as a representative of a commercial organization, wanted to get a lot of information about food and food products, there are a good many places I could go and get the information other than the Bureau of Chemistry, and where the commercial organizations do go.

Mr. HAND. Reliable information?

Mr. REICHMANN. Yes, sir. But for an administrative officer of a State, the necessary place to go is to the Bureau of Chemistry. As an administrative officer of a State, in the matter of weights and measures, the only place for me to go is to the Bureau of Standards. But there are 10,000 other details which you want to get, which it is

clearly not the function of the Bureau of Standards to keep up with, because it is a purely commercial and business proposition that could not be handled here.

Mr. GOODWIN. Mr. President, as I understand this question, our sole object should be the protection of the public at large, not the favoring of any particular organization of buyers or sellers; and any resolutions that we adopt, and any work that we do, should be in the interest wholly of the public, not in the interest of individual corporations or organizations. If it is for the best interests of the public at large—of our country, you might say—to favor laws regulating the sizes or the weights of commodities sold, we should do so, and we should be careful, because that is, and should be, in my opinion, the duty of any sealer or inspector of weights and measures.

Mr. MARONEY. Mr. Chairman, I move that we extend a vote of thanks to the gentlemen who are here representing these associations, whose troubles, I hope, we will be able to rectify.

The SECRETARY. Mr. Chairman, before that motion is put I hope this matter will be discussed a little more. We have not drafted any law; we have not passed on any law. We are no better off than when we started, it seems to me. We have simply declared ourselves as being in favor of uniform containers. That is not accomplishing very much; we did that several years ago, and so I do not think this is the time to pass a vote of thanks—that is, I hope these gentlemen will remain with us longer; but I want to interrupt the discussion at this time so that we may hear Mr. Epright. Mr. Epright, who was invited down here in the name of this conference, must leave to-night, and I would like to postpone this discussion long enough to have him give us his paper.

Mr. HASKELL. Mr. Chairman, I move that a committee of three be appointed by the president of the association to take up this matter of containers and report, if possible, to-morrow—if not, at a future meeting, but, if possible, to-morrow—so that we may act upon it. I agree with our secretary that a very important talk will be given to us regarding scales, which I think we all ought to hear.

The SECRETARY. I second the motion.

Mr. REICHMANN. Mr. Chairman, I am opposed to the motion. We have already adopted a resolution favoring uniform containers, and I do not think a committee appointed here to-day could intelligently discuss the question of uniform containers and make a report on it to-morrow. Did you say to-morrow, or some future day?

Mr. HASKELL. I said, if they could, to-morrow.

The SECRETARY. Mr. Chairman, I certainly hope that they will be able to report to-morrow. So far we have not accomplished anything. I do not think this sort of action is going to be very satisfactory to Mr. Cummings or Mr. Bahrenburg. They knew we were

in favor of this before they came here; everybody knows that we are in favor of uniform containers. That is not a matter for discussion at all, or for resolution. I should certainly like to see something drafted along the lines suggested by Dr. Reichmann. I am perfectly willing to accept that if that is agreeable.

Mr. HASKELL. With the consent of the second, I move that this committee report to-morrow before the adjourning of this conference.

The ACTING CHAIRMAN. If there is no objection, that amendment will be accepted.

The question was taken and the motion was carried.

The ACTING CHAIRMAN. I will ask Dr. Stratton, the president of the organization, if he will keep the matter in mind and appoint that committee.

Now, Mr. Secretary, I would like to consult with you in regard to the rest of the program.

On motion of Mr. Reichmann, section 7 of the program was voted the order of business for the next day, together with the State laws.

The SECRETARY. Mr. Epright has kindly consented to give us a talk on railroad scales. He came down here especially for that purpose, and I think it will be a very interesting talk, indeed. He is chief scale inspector of the Pennsylvania Railroad and as such has constructed, I believe, what are the largest railroad scales in the world. I do not know of any other scales that are any larger. I heard him give this talk in Albany and was so impressed with it that I immediately asked him to give it here.

Mr. EPRIGHT. Railway service requires continuously accurate scales, but at present there are very few companies which have a thorough system for maintenance and for making the proper tests and corrections, and it is a regrettable fact, speaking generally, that many track scales are never tested and are always believed to be correct until decayed and condemned as being unsafe in the roadbed.

The Pennsylvania Railroad seems to have been the pioneer, in this country at least, in establishing an efficient scale organization, and as most of the other companies who have gone into the subject have adopted, in most part, the plan of supervision as outlined by this company, we thought it advisable to present our methods of construction, test, and maintenance of railroad track scales.

A careful analysis of the lever systems of track scales in use today has established the fact that those of the 4-section type are superior to those of any greater number of sections. For this reason the Pennsylvania Railroad Co. has adopted as their standard a 4-section, 52-foot track scale having a capacity of 300,000 pounds and embodying the most modern ideas of scale construction, the features of which will be considered in detail.

In this type of scale the wooden substructure has been eliminated; in fact, no wood whatever is used on the scale proper except in the ties supporting the rail columns. These ties are placed on the platform to absorb the shock caused by the wheels of the car when they first strike the platform and to protect the scale in case of derailment.

With the old type of track scale generally in service the overhanging portion of the platform has an opportunity to tip, as when the first pair of wheels strike the platform the other end is caused to rise, and as the movement proceeds an accelerated, powerful return occurs. The intensity of this force is very destructive to all parts of the scale. In the new type of scale the "overhang" has been eliminated, which reduces the destructive effect of the entering car to a minimum.

The lever system has been scientifically worked out and 100 per cent allowed for impact and live load, so that the stresses are entirely within the margin of safety established by experience. Heretofore practically no consideration has been given to this point by the manufacturers of this type of scale.

The surface of the platform is supported independently from the scale mechanism. This form of construction renders the scale immune from the effects of wind pressure, rain, snow, or ice on the platform.

The suspension bearings, introducing what is known as the "Cradle principle" in this scale, differ materially from the rigid type of bearings formerly used in that they get rid of the movements of the knife edges across the faces of the hardened steel bearing planes when oscillations of the platform occur. This design also provides greater freedom of action and greatly reduces the dependance put upon the check rods to retain the platform in its proper position. The design of this bearing is intended to preserve the accuracy of the scale, and the various details have been worked out with a view of specially adapting it to the relieving gear.

In designing the knife-edges a maximum load of 4,000 pounds was set for each linear inch of contact, whereas in most of the older types each inch of knife-edge was under a maximum load, which in some cases amounted to as much as 10,000 pounds.

Notwithstanding the fact that the weight of the levers have in some instances been increased three or four times, the sensibility has not been materially affected. This is due in a measure to the fact that more machine work is being done on the scale, and it is also partly due to the fact that a more uniform distribution of the load in the lever system is obtained.

All the knife-edges and bearing planes and corresponding contact points in this scale are made of vanadium steel, it being claimed for

this steel that it is less susceptible to corrosion and wear and that consequently it will give longer life to and preserve the sensibility of the scale.

The independent alignment of each individual lever has been made possible by an improved connection of the levers. Leveling pads are also provided on all levers with faces machined, so that in all adjustments the original plane of the knife-edges is preserved.

The scale is provided with a full capacity beam reading to 300,000 pounds and is equipped with a poise operating on specially designed ball bearings, which reduces the frictional resistance of the poise to motion from about four pounds to about three or four ounces.

The large weight of the movable poise causes a slight displacement of it to correspond to a relatively large weight on the platform. This makes it imperative to have the teeth cut accurately in the beam and to have the latch engaging in the teeth to seat accurately at all times. This proper seating is secured by the design of spring and latch provided, one of the features of which is the spring and its adjustment, which enables a firm pressure on the latch to be maintained.

Probably the most radical departure from the old form of construction is the introduction of the relieving gear. This takes the place of the rigid dead-rail system with its cumbersome supporting columns that fill the vault practically full of metal and prevent proper inspection, operation, and maintenance of the bearings and other parts of the scale. All the metal parts of this scale present easy access for inspection, cleaning, adjustments, or renewals.

The fundamental parts of the relieving gear consist of a series of eight toggle jacks supported in pairs by universal bed plates. These jacks are operated by a torsion shaft with suitable link connections at each of the four sections. The shaft is in turn operated by a double-ended cylinder controlled by the weighmaster in the scale office, the controlling power in a few cases being water, but air has been found to be preferable.

When it is desired to make a dead rail out of the scale rail the weighmaster operates a four-way controlling valve causing the toggle jacks to be operated so that the vertical pistons (or plungers) travel upward against the I-beams forming the metal bridge. This action raises the platform from the suspension links and takes the weights off the knife edges without causing them to be disturbed, so that the operation of the relieving gear (which is done in about one-half second's time) is accomplished without disturbing the contacts of the knife edges on the bearing planes, which preserves the alignment of the lever system.

When the jacks are operated, making a dead track out of the scale track, semaphore arms at either end of the scale platform are auto-

matically actuated, indicating that the dead rail is set for the use of engines.

The total weight of the platform is about 38,000 pounds, and, with 80 pounds per square inch in the cylinder, the bridge can be raised so that an H-6 engine, loaded, imposing a maximum load of about 283,000 pounds, will not show any weight on the beam when going over the scale. It is of course impossible to work the operating gear under a superimposed load, but this is not necessary, as the average interval between cuts of a car is about eighteen seconds, and the relieving gear can be operated in this time.

It is desirable to provide simple and effective means by which, with a minimum of attendance and skill, the cars may be passed rapidly and without stopping over the platform of the scale with the proper velocity to permit each car to be weighed as it passes, regardless of the usual variations in the length of successive cars.

To accomplish this the track over which cars pass to the platform is provided with an elevation or hump, the height and distance being so proportioned that when cars are pushed at a uniform rate up one side of the hump (being uncoupled from each other before or while being pushed up the hump) each car will pass over the top and run down the other side and so on to the scale platform with the proper velocity to be accurately weighed.

The design of the hump is such that the elevation of its apex above the scale platform can be adjusted. In winter when everything is taut the apex of the hump should be somewhat higher than in summer when cars form less rigid structures. In winter the lubricant also becomes stiff, affecting the free running of the cars.

With reference to yards at which necessity demands that loaded cars should be weighed and empty cars classified over the same hump a compromise may be made in its height.

For rapid and accurate weighing it is desirable to have the scale platform and adjacent side of the hump as short as possible, and in practice it has been found advisable to make this side of the hump about equal to the distance between the centers of the wheel trucks of the cars having the shortest wheel base.

It is a matter of common knowledge that cars passing over a railway-track scale located at the head of a classification yard are not of one pattern, and the distances between the front and rear wheels vary.

The time in which a moving car may be weighed is that elapsing from the moment the rear wheels pass on to the scale platform to the instant the front wheels pass off, and in order to keep this time down to a desired minimum, cars having a short wheel base should move more rapidly across the scale platform than cars having a longer wheel base.

With the advent of the hump the effect of this variation in the wheel-base length is in a measure automatically compensated for. Other things being equal, when the side of the hump adjacent to the scale platform is short, as it should be, the velocity acquired by the cars running down the side of the hump varies inversely with the length of the wheel base of the car.

Standard plans have been carefully worked out which not only provide for the electric lighting of the vault under the scale but also for the scale office inside and the vicinity of the scale outside. This insures the proper grading of light for night weighing. A standard bay-window front in the scale office is also provided which gives an unobstructed view for the weighmaster in both directions. The designs also include plans for the artificial heating of the vault during winter months, the temperature being controlled automatically.

Any scale should be tested with correct weights approaching nearly the capacity of the scale. A four-section railroad scale of 100 tons capacity should be tested with a weight of 25 tons, which when placed consecutively over the different sections should give an indication as to the performance of the scale at full capacity. For convenience in transportation, this weight may be made in the form of a car with a short wheel base, built in a substantial manner to stand the wear and tear of service.

The design of our regular test-weight car, known as the class "YB" car, is superior in every way to the type of test-weight car formerly used and is now being copied by most railroads. The car is specially low and squatty, with the wheels projecting up into the casting which forms the body of the car. There is no shifting load inside to change the center of gravity; however, there is a pocket for carrying 100 pounds of 50-pound test weights, which are neatly fitted into place, and there is a small receptacle to retain the extra weight made necessary by the fluctuation in the weight of the car.

The underside of the car is provided with snow shields and is entirely free from projections which can collect material picked up by the whirl when traveling at a high speed and which would necessarily change the weight of the car.

In addition to this car which is used in regular service, we have a special design of test-weight car for carrying 50-pound weights for testing wagon scales or stockyard scales up to their full capacity. The construction consists of eight compartments, four on each side of a central passageway running the length of the car, each compartment holding 5,000 pounds of 50-pound test weights, or a total of 40,000 pounds. The weight of the car alone is about 20,000 pounds and with the test weights makes a total of 60,000 pounds for the combination. As the wheel base is suitable for a four-section 46-foot

track scale, the car is often sent out as a heavy test-weight car for testing the regular track scales.

To insure results and in order that the work may conform to the United States standard of mass, the Pennsylvania Railroad Co. has in its possession a set of master weights, which at intervals are returned to Washington to be verified and have their values corrected if necessary. The last time these weights were returned for verification the 50-pound master weight was out less than 1 part in 350,000, or less than 1 grain in 50 pounds.

When the master weights have been verified and returned from Washington, the values of our working or shop standards are derived by comparison with the master weights on a specially constructed balance of high sensibility, the sensibility being less than 2 grains in 4,000 ounces.

After the shop weights are made to conform with the master weights, our 50,000 pounds of 50-pound test weights are checked and resealed, this work being done on a shop balance which has a sensibility of about 2 parts in 350,000, and the practice has been to seal these weights as close as the balance will weigh.

After the values of the 50-pound test weights referred to above have been corrected, they are used to try out the master scale upon which the test cars are proved.

This master scale was specially designed for the purpose by the Pennsylvania Railroad Co. and is of all-steel construction, with a capacity of 120,000 pounds. Under a load of 50,000 pounds, the weight of our heaviest test car, it shows a sensibility of about 1 pound.

After the regular test-weight cars are "proved" on the master scale, they are placed in charge of a competent scale inspector and started on their various routes covering the entire system.

Special instructions have been issued that no work of any nature whatever shall be done on the cars in transit unless the scale inspector is present, and then only such repairs are made en route as will eliminate any possible element of danger. We have found these precautions necessary to insure the value of the weight of the test car at all times, and by this system the actual variations of the cars between trips can soon be ascertained and a compromise made if necessary.

The various test-weight cars ordinarily require from six to eight weeks to make a complete circuit, after which they are returned to the master scale at Altoona for correction, if it should be necessary. While admittedly an unusual record, we will say that a car has been known to make as many as seven trips, aggregating as much as 10,000 miles, without varying more than 10 pounds in weight, notwithstanding the fact that a great deal of this travel was made during the winter months.

When the cars are returned for test they are examined and any repairs needed are made. The boxes are sponged, etc., so that little, if any, work will be required on the trip.

As in other callings of life, in the construction and testing of railroad track scales ability is required, the importance of which fact is appreciated by some railroads, while others are apparently indifferent to it.

It is highly desirable to indicate the principles and method of testing and adjusting track scales, as it is a procedure that must be successfully carried out before the scale is reliable.

In order to bring out the fundamental features, simplifying assumptions will be made and a diagram will be used.

We first will assume that flexure of the parts does not occur and that the bearings and levers are mechanically perfect, and that when a test-weight car is placed immediately over any point of support that the load is carried by that support alone; and we will further assume that the load is always equally divided between the two main levers of a pair, so that their separate effects do not need to be considered.

Referring to diagram (p. 75), the weight of the platform and load is carried on the main levers M, M_1, M_2, M_3 , etc., at the points marked with W . One end of each of the main levers is supported on a supporting post mounted on the foundation at the points marked P_1, P_2 , etc., and the other end transmits the force of the load to the extension levers, E_1, E_2, E_3, E_4 , at the points m_1, m_2, m_3 , and m_4 . The extension levers run parallel to the track and are supported on piers at the points marked F . The ends of these levers are connected by links, marked n_1, n_2, n_3 , and n_4 , by means of which the pressure of the load is transferred from the points m_1, m_2 , etc., to the fifth lever "5" at L . The fifth lever conveys the combined force from all of the levers to the shelf lever S , from which it is conveyed to the beam. To assist in following the action the arrows are placed to indicate the direction of the force produced by the load.

The operation of the scale depends upon the multiplying power of the levers in transferring and reducing the force produced by the load from the point of application to the beam. For this to be done correctly it is necessary that the lever arms be correct. In order to make it possible to adjust the lever arms to the correct value the end knife edges are mounted on adjustable nose irons as mentioned previously.

Let us now fix our attention upon the effect on the multiplying power of changing the nose irons at different points. If the lever length at n_1 is changed it alters the apparent weight, as shown on the beam, of a load applied at m_1 , loads at other points being unaffected. If n_2 is changed it alters the apparent weights of loads applied at either m_1 or m_2 the same proportional amount. The same conditions

obtain for n_1 and n_2 of the right-hand set of levers. Therefore, by changing n_1 we can cause the apparent weight of a given load to be the same when applied at m_1 as when applied at m_2 . In a similar manner we can change n_1 so that loads applied at m_2 produce the same effect as when applied at m_3 . Now, by changing n_2 or n_3 we can make the two right-hand extension levers produce the same results with a load as the two left-hand levers. In this way all levers are made alike, that is, a load has the same apparent weight when applied at m_1 , m_2 , m_3 , or m_4 . However, this apparent weight may not be the correct amount. To illustrate, a load may weigh apparently 20,200 pounds at every point when the true weight is 20,000. This is easily remedied, by moving the nose iron on the fifth lever at n_5 or at the end of the shelf lever at n_6 . By this means the combined effect of all levers is altered as a whole so that the balance now shows a weight of 20,000 pounds and the scale is therefore correct.

The process has then consisted of two parts:

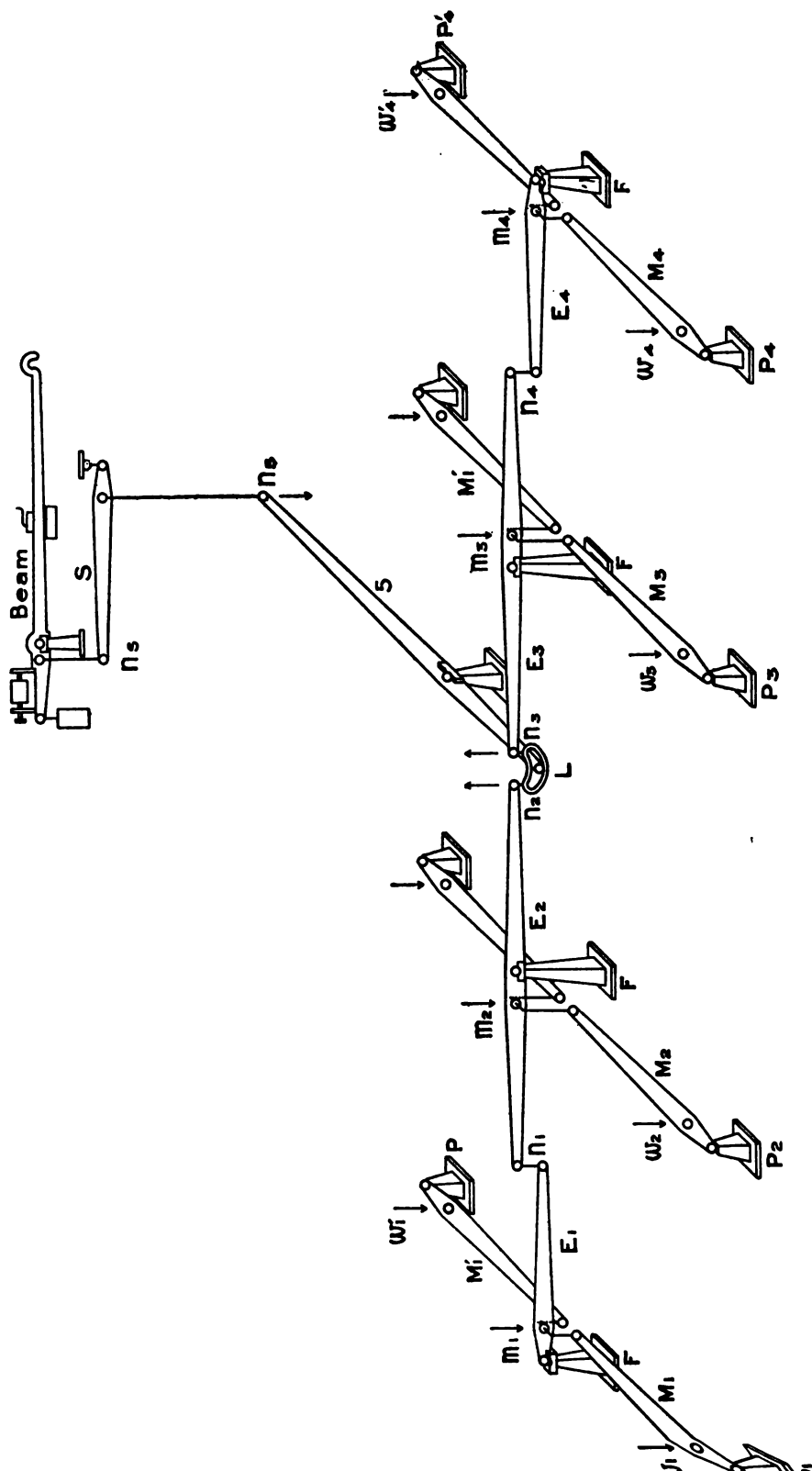
- (1) Make all levers read alike;
- (2) Make the readings correct.

The preceding will serve to fix in mind the principles involved and the relations of the parts.

In practice the adjustment of the scale is not so simple a matter as might be inferred. One important point should be mentioned. When a test-weight car on the platform is placed over any point of support, as m_1 , m_2 , m_3 , or m_4 , that point of support does not carry all of the load. This distributing effect is due to the rigidity of the platform. This fact makes it impossible to place the test-weight car over each section and then compute with certainty the amount of nose-iron movement necessary to correct the scale. Other things that tend to cause uncertainties are mechanical imperfections.

For instance, when a 25,000-pound test-weight car is placed successively over each of the sections at the points m_1 , m_2 , m_3 , and m_4 , the resultant weighings may be 24,990 pounds, 25,000 pounds, 25,100 pounds, and 25,600 pounds, respectively, and it may be found that on changing the nose irons at n_4 , changing the last section, the scale can be corrected so that it will now show 25,000 pounds over each section. This last section being off would make all of the levers appear off as when the load was placed over m_1 , m_2 , or m_3 part of the load was carried over m_4 , which contributed its error.

From this it is obvious that the adjustment of track scales is reduced to an empirical basis, and that the actual procedure in a given case depends upon information obtained from previous experience with that type of scale. That is, while the law of the levers may hold perfectly, full advantage can not be taken of the fact on account of other uncertainties. Thus a large part of the correction has to be done by an intelligent use of a method of trial and error.



With these facts in mind let us now take a more general case. We will assume that a test car weighing 25,000 pounds is placed over m_1 of a four-section track scale and after an accurate balance is struck a reading of 25,020 pounds is obtained over m_1 , 24,950 pounds over m_2 , 24,900 pounds over m_3 , and over the last point, m_4 , 25,010 pounds.

We will now tabulate the differences from the desired value, as follows:

Levers	E_1	E_2	E_3	E_4
Points	m_1	m_2	m_3	m_4
	+20	-50	-100	+10

Adopting the shop terminology the differences have the signs given above. This corresponds with the adjustments that have to be made on the lengths of the corresponding levers to correct plus to increase length minus to decrease length of the levers could be handled separately.

However, the levers can not be handled separately so that the procedure in this case is to shorten E_4 at n_4 to make it agree with E_3 . E_3 can then be shortened at n_3 changing both E_3 and E_4 . In the same way E_1 should be shortened so that its errors agree with E_2 by alterations at n_1 after which the effect of E_1 and E_2 can be changed alike by changes at n_2 .

The movements of the nose irons at the various points n_1 , n_2 , etc., can all be made before the load is reapplied and can be based upon the formulas of the levers. The results of the simple formulas will have to be multiplied by certain factors depending upon the levers E and the design of the scale. These factors will have to be obtained from experience. After the changes are made the test-weight car can be placed on the platform again and the test repeated until this part is satisfactory.

By having experience and exercising intelligence, the number of trials necessary to make the final adjustments can be markedly reduced.

It yet remains to test the action of the beam and poise and other important details, which is beyond the scope of the present paper. However, these last tests are simple and obvious to anyone acquainted with the general principles of scales.

In testing and adjusting railroad track scales the design and construction, as well as the condition of the scale at the time of the test, have a great deal to do with the results obtainable. The workmanship is to be considered, as from this serious and endless varieties of errors can arise which need not be here enumerated.

Pivots and bearings in a scale are the most important and perhaps the most neglected parts.

Friction between the pivots and bearings cause serious errors in weighing. By friction, pressure, and corrosion the knife edges may be flattened and the bearings may be worn, permitting an endless variety of leverages in place of the original definite ones.

It is good practice to make the bearings slightly harder than the knife edges of the pivots to avoid cuts and indentures.

As railroad track scales are usually built in freight yards, without a roof to protect them, and often they are without proper drainage, it will be seen that rust is a very active agent in destruction. Oil has been applied to the working parts and vertical connections, and when indiscriminately used is worse than the corrosion. Experiments have been made with lard oil and petroleum, but the results were not satisfactory, as the oil, spreading over the pivots, loosened their hold in the levers and sockets, and the arched loops, when oiled, were found to slip freely into new positions, altering the vertical connections to the extent that rebalancing was necessary. Furthermore, the accumulation of dust on a moist surface does not improve or maintain ideal scale conditions.

Proper oil should possess great viscosity, be nonhardening in air or dampness, and should be free from acid. Its application should only be in places where its bad effects would not cause serious results. A comparative test between the eight main levers in one scale, four of which were lubricated, has shown that the destruction by rust is greater than by wear. However, scales located in a dry place and not affected by moisture require very little attention along this line.

Deflection of materials is another source of errors. When the levers or other parts assume a set under a load an error has been developed. However, it is difficult to set a tolerable limit for deflection, as it increases with the velocity with which the load may be applied.

On motion of Mr. Haskell the remarks of Mr. Epright were ordered incorporated in the proceedings of this conference and the thanks of this body extended to him for his kindness.

Mr. EPRIGHT. Mr. Chairman, I have a lot of photographs here, and if you have no objection I will pass them around.

The ACTING CHAIRMAN. Yes; I know the conference is very much interested.

On motion of Mr. Reichmann section 9 of the program was postponed and made a special order of business for next day, to be discussed with sections 5 and 7.

The CHAIRMAN (Dr. Stratton). The next on the program is the question of tolerance. In considering these measures that have come up, that have been introduced in Congress and discussed here and elsewhere from time to time, the question has always arisen as to whether or not tolerance should be allowed. There have been those

who believe tolerance should be stated in any legislation, and those who think that if tolerance is stated it will be taken advantage of. Now, it is at your pleasure to discuss this or not. If it is not sufficiently important to discuss, drop it out; if it is, then discuss it.

Mr. REICHMANN. It does not mean that we are to discuss the size of the tolerance or that sort of thing?

The CHAIRMAN. No, unless you can do that. We do not wish to tie you up in any way.

I might state what suggested it to my mind. When the amendment to the pure-food bill was discussed some weeks ago, which was informally, by the chairman and members of the different associations, this question of tolerance arose, and there seemed to be a divided opinion. I believe this amendment finally went in, and the question of tolerance appears as a paragraph, or rather a sentence. Our opinion was asked in regard to that. I said that the bureau would favor a tolerance being stated, provided that tolerance was specified in a proper way. It is of no use whatever—I think, perhaps, you will all agree with me—to say that any given capacity or weight shall be correct within a certain amount. We stated that if the tolerance was 1 ounce they could arrange it to weigh in all cases 15 ounces if they chose to do so; and the compromise was upon this basis, that is, I stated that I thought there would be no objection to the sentence in regard to tolerance remaining in this law provided the framing of the regulation was left to the board—the ordinary board which frames the regulations; in other words, that the tolerance could be framed so that it meant as much above as below.

Mr. REICHMANN. Mr. Chairman, I do not believe anybody will take issue with that. I move that we accept that statement of the chairman as the sense of this conference.

The motion was seconded.

Mr. GOODWIN. Mr. Chairman, I object to this resolution being passed. I believe if there was 1 ounce of tolerance allowed, either on the maximum side or the minimum side, that the minimum side would be taken advantage of. I do not believe in tolerance. In case there was a tolerance allowed of 1 ounce, we will say, taking that as a basis, it would soon become universal, and all we would get for a pound would be 15 ounces. Therefore I say that I think it would be a dangerous law, because I think the majority of the dealers would take advantage of it, and they would give the people 15 ounces for a pound, which means 16.

Mr. REICHMANN. Mr. Chairman, I think Mr. Goodwin misunderstood your proposition.

The CHAIRMAN. I think so, too. Mr. Goodwin, I do not think that you will get any legislation whatever that does not provide for reasonable tolerance.

Mr. REICHMANN. And Dr. Stratton's statement was to leave that to the administrative officer—the administrative board.

The CHAIRMAN. In other words, it was the opinion of all those at that meeting at which I spoke—and my object in bringing this up here was to make sure that you agree with us in that—that if this tolerance was stated as 1 ounce and could be so regulated that as many went over as under, they were all right. That is a matter of regulation.

Is there any further discussion?

Mr. GOODWIN. Mr. Chairman, I hate to take up the time, as I want to hear from others. But we have no tolerance allowance in the State of Rhode Island. That subject is left entirely in the hands of the local sealers. They are to be the judges of what they shall allow and what they shall not, and it seems to me it works well in dealing with all the subjects that we have to do with.

The CHAIRMAN. How do you know, Mr. Goodwin, when you have an exact pound?

Mr. GOODWIN. There is nothing perfect, you know. We understand that. But there should be somebody——

The CHAIRMAN. Every time you touch a weight you are using tolerance, and you can't get around it.

Mr. GOODWIN. That is very true. That is a broad way to look at it. But I believe that the man who is making the test should be the judge as to whether the thing will pass or not. That is the way we are in Rhode Island, and we get very satisfactory results; and I believe it is better to leave it in the hands of intelligent men who are familiar with that business—and that is what we feel we have got—than to have any regulation to govern us. Of course I am only giving my humble opinion of the matter, and I am a man that has had no great experience, but from the results that I have got and observed in the State of Rhode Island I think our law without the tolerance works very nicely.

Mr. REICHMANN. Question, Mr. Chairman.

The CHAIRMAN. The question is called for.

Mr. REICHMANN. The question is that the conference is in sympathy with the statement made by the chairman, that the question of tolerance should be left to the administrative board, instead of being prescribed by statute.

The question was taken and the motion was carried.

Mr. PALMER. Mr. Chairman, if we have closed this part of the discussion I would like to break in here with the question of the advisability of having the annual conference held at some other city than Washington. I did not mean to bring this up with any reflection at all upon our treatment at the Bureau of Standards, because it has always been the very best and nicest, and I know the officials are not

thin skinned enough to believe that that is the reason I bring it up. But I know that they as well as myself and others want to do the thing which is best for the conference, and as that matter has been brought to my attention I thought I would bring it before the conference so that we could discuss it—perhaps briefly, as the hour is late—and get the opinion of the organization as to what we want to do. I personally believe that it might be a good thing, inasmuch as wherever we go we naturally bring the cause of weights and measures more prominently before the people in that section; but I do not want to do anything which does not meet the approval of the rest of the delegates, and I would like an opinion on this question.

MR. REICHMANN. Mr. Chairman, is not that a matter proper to be decided by the executive committee? It is within the province of the executive committee to call the meeting, and they can call it wherever they want to. Of course I think Mr. Palmer's idea is simply to have an expression of sentiment from the conference.

THE CHAIRMAN. Mr. Reichmann, I think it is within the function of the executive committee, but I feel sure that the committee would rather take that step after having an expression of opinion. I should like to have it discussed to a slight extent at least.

MR. PALMER. I am a member of the executive committee, but I did not think I wanted to vote on that question without some expression from the conference.

THE SECRETARY. Mr. Chairman, I have talked this matter over to some extent with Mr. Palmer and also with you, and so far as the bureau is concerned we have not the slightest objection to having the meeting anywhere else; that is, we do not feel that we have any particular right to say that it shall be held here. As a matter of fact, I think we have considered in previous years the advisability of holding it at some more central place, occasionally at any rate. I must confess I do not know whether we would get more of an attendance if we did change the place of meeting, but I think it would be a good thing to discuss. The reason I am doubtful about that is that many people will come to Washington that will not go to some other city, and in addition to that most of the people that we are liable to get at the present time are in the East. I am not using that as an argument why we should meet here. I simply state that that is the only thing which makes it doubtful. If we were thoroughly organized and had every State represented, I do not think there is any question but what we would meet at other places occasionally.

MR. REICHMANN. Mr. Chairman, I am thoroughly in favor of that proposition. I have been talking to Mr. Palmer a good deal about it, and I asked him, as a matter of fact, to bring it up, because I was afraid if I brought it up the secretary might not be in favor of it.

I think there is no question in the world that if we had this meeting at a different place we could get as much of a crowd as we can here; and, as a matter of fact, so far as the State officials are concerned, there are very few here now—a smaller number than have ever attended any of these conventions. I think you will find that just as many people would come to New York City and just as many people would come to Chicago. Then there is the point that the chairman raised this morning. There is no particular advantage in coming here at this time of the year when Congress is about to adjourn; whereas if we met here every other year or every three years, at a time when the conference wanted to bring something to the attention of Congress, it would be all that is necessary; and I think that if we had the other meetings in some other section we could get a lot of local sealers. For instance, take the case of New York. It would be a very easy matter if we had the meeting in New York City to get the majority of the local sealers in New York State, Massachusetts, Connecticut, Rhode Island, and that whole section, and, moreover, many people from civic organizations. I have not the least doubt that we could have a meeting with an audience of at least 2,000 people; as a matter of fact, I would be willing to guarantee that audience.

The CHAIRMAN. Let me suggest a plan that I think will satisfy both needs. We must not break away from the bureau altogether, because one of the prime objects in calling this convention in the first place was that the sealers should occasionally come to the bureau and keep in touch with the bureau; that we could gain a good deal from them and they gain something from us. Now, if we could meet at the bureau, say every other year, at the beginning of the long session of Congress, and let the alternate meetings be at other places, that might be a good plan.

Mr. REICHMANN. I move you, Mr. Chairman, that we leave this discussion in the wise hands of the executive committee.

Mr. AUSTIN. I support that motion.

Mr. GOODWIN. Mr. Chairman, in favoring the change of location, I think it would be nothing more than just to the western, southern, and southwestern delegates to hold a meeting occasionally—let it be at the discretion of the executive committee—in some central location. We had delegates here last year who came from remote sections of the country, showing their great interest in this work; and some of them were stalled—endeavored to get here and did not reach their destination. I believe that we people in the East should show a like interest in our work, and that we should be willing to go West and give those people a chance to get to the place of meeting without so much hazard, trouble, and expense. I hope this matter will be left in the hands of the executive committee, and that the next meeting—

or the one after it, if they so decide—will be held in some more central section.

Mr. WALL. Mr. Chairman, Pennsylvania, I believe, has been represented in every conference since it started.

The CHAIRMAN. I think it has.

Mr. WALL. I do not see any reason at all for changing from Washington and the Bureau of Standards, and I am in favor of meeting here every time the conference meets. Washington is the Capital of the United States; it is east of the center of the United States quite a good ways; but considering the geographical location you would have to go west of Omaha to get to the center of the United States. The first conference was held here through the kindness of this bureau, and I think that this bureau has been a great inspiration; and until we get together in better shape on uniform legislation I can not see how we are going to gain much by changing the place of meeting. We may possibly get more people together, but I doubt it. It is a privilege to everyone to come to Washington, and if I had a vote I would vote in favor of continuing our meetings here.

The CHAIRMAN. The question is called for.

Mr. GOODWIN. Mr. President, I would like to hear from some of the western delegates.

The CHAIRMAN. That question of the geographical distribution in my mind does not amount to anything, for the reason that travel is quick and convenient. But the other is a very great and very important question, as there is a very great deal to be gained sometimes by mixing with different sections. We appreciate what has been said by the gentleman from Pennsylvania, but at the same time we do not want you to think that the bureau is trying in any way to run this thing. We were instrumental in getting it started, and we think it is sufficiently well started to run along. We want to assist it; we want to do all we can for it, and we want it located at the place where it will do the most good.

Mr. AUSTIN. Mr. Chairman, it has been suggested that we hear from the West. I think Michigan is the farthest west of the States represented here.

The SECRETARY. Nebraska is represented by Mr. Jackson.

Mr. AUSTIN. I will make that exception. However, on the subject of changing the location, I feel, so far as my observation goes (this is the first convention I have attended), that it is the wise provision to leave the matter in the hands of the executive committee and let them fix the place of meeting where they think it will do the most good. However, if you want to go west, I do not know that you can find any better location than Detroit, Mich., where life is worth living. [Laughter and applause.]

Mr. THOMAS. Mr. Chairman, since the West is giving its views (although we do not call ourselves the West out there) I would like to say a few words on the matter. As to the choice of the place of meeting I have no preference in particular, though I enjoy coming to the Bureau of Standards very much. But it happens that the expenses of the delegate from Ohio have to be met by a special item in the general appropriation bill. Request has been made for the expenses of a delegate to the conference of next year, on the supposition that it will be held in Washington. Now, if we go farther away than Washington the estimate will not cover the expense. [Laughter.]

The question was taken and the motion was carried.

The CHAIRMAN. Is there any further new business?

Mr. REICHMANN. Mr. Chairman, Mr. Boyer, of Pennsylvania, asks for an expression from this conference as to the bills now pending before the legislature in Pennsylvania. I wrote a resolution, but I suppose before we have a resolution it will be perhaps better to have a committee appointed to look over those bills. I have looked over them and I see that they are all right, but a lot of others may not think so, and it would perhaps be best to have a committee of three appointed to look over those bills and then introduce a resolution to-morrow morning—unless there are three that have already looked over the bills.

The SECRETARY. I would suggest that we make this resolution a little more general, and not approve bills 482 and 483 especially.

Mr. REICHMANN. Mr. Chairman, my experience with State legislation (and I imagine the experience in Pennsylvania is very nearly the same) is that a resolution, unless specifying very definitely a certain bill, has very little effect with the committee, because that only expresses a general sentiment. I would not give 5 cents for a general resolution, but I would give a great deal for a resolution on one specific bill.

The SECRETARY. The only question is, does the conference favor this bill. I for one do not, and yet I would vote for the general proposition to establish such a bureau as that contemplated by the bill, if that is the best that can be done.

Mr. REICHMANN. That is what I say; and I move that a committee of 3 be appointed to look over that bill and prepare a resolution to that effect.

The motion was seconded.

The SECRETARY. I would like to make one statement in regard to this bill. As I understand, it is intended to get around a certain feature of their constitution. Now, out in California they had the same experience, and when they put in a weights and measures bill they put in at the same time a bill to amend the constitution so that

they could appoint a State sealer. Now, why can't that be done in Pennsylvania?

Mr. REICHMANN. For the very simple reason—I believe I am right in that proposition—that in Pennsylvania an act to amend the constitution has to pass two sessions of the legislature and then be submitted to a vote of the people.

The question was taken, and the motion was carried.

Mr. PALMER. Mr. Chairman, you had another committee to appoint, you know.

The CHAIRMAN. Yes; I had that in mind. We still have a little time. Are there any other items of new business?

Mr. MCINTYRE. Mr. Chairman, in connection with this motion to refer the Pennsylvania bills to a committee, I would like to state that we have here a bill from Wisconsin, modeled very closely after this model bill, the one that emanated from this office, and we would like to have some expression of opinion on that. This will be considered before our legislative committee about the time we return, and we want, if possible, to go back with some expression of opinion on that bill. If that could be referred to the same committee—

The CHAIRMAN. If there is no objection, we will understand that that will be referred to the same committee.

It was voted to proceed with the next heading.

The CHAIRMAN. We will proceed to the next item of business, No. 12, which is the election of officers. The officers are the president, vice president, and secretary. You will note that we never have had any treasurer of this meeting, because we have never had any funds to take care of. If it suits your pleasure, nominations for president are in order.

Mr. GOODWIN. Mr. President, I feel that the duties of president of this organization have been admirably performed by the present official, and I would move his reelection.

Mr. MARONEY. I second the nomination.

The CHAIRMAN. Gentlemen, I want to say that while I appreciate your compliment very much indeed and will be glad to do all I can, I do not want you to feel that it is my desire or the desire of the bureau to hold the offices. I shall not feel at all offended if you desire to elect someone else. I do not know but I should prefer it. I want to bring about a condition in this meeting that will always permit of the freest and most open discussion. I do not want my presence in any way to hamper you or to be a detriment to the freest discussion. I should be more than pleased if you would nominate some one in my place. On the other hand, I shall be pleased to serve in my humble way if that is your wish.

Mr. HAND. Mr. President, I believe that just at this time, in the organization of this work, it is very important to have some one in

the office of president who takes a great interest in the work and who is familiar with it; and I therefore move you, sir, that the secretary be instructed to cast the vote of the association for Dr. Stratton as president.

Mr. BOYER. I second the motion, Mr. Chairman.

The question was taken and the motion was carried.

The SECRETARY. I take great pleasure in informing the chairman that the convention has unanimously elected him president for another year.

The CHAIRMAN. Gentlemen, I appreciate this very much. I think there is quite a future before the association. Some things have been very gratifying to us, and some have not, and we must try to forget those that have not. I hope you will always feel free to make suggestions and criticisms, and that in the end we will all be pulling together for the thing that seems to be for the greatest good.

The next in order is the election for vice president. Nominations are in order.

The SECRETARY. Mr. Chairman, I nominate Mr. Palmer to succeed himself.

Mr. HENRY. Mr. Chairman, I second that nomination.

Mr. BOYER. Mr. Chairman, I move that nominations be closed.

Mr. PALMER. Mr. Chairman, I would like to say a word on this question. The responsibility of the vice president is very small, of course, but it seems to me it would be a good plan to have somebody else this year, and shift these little offices around. It might be of some advantage to the representative of some other State to be able to say that he was vice president of the national conference. It has been a great pleasure for me to say so. But I have had it two years, and I would prefer to see somebody else nominated. Of course I will do all I can, as I have in the past, whether I am vice president or not. I would suggest that somebody else who has not been active in the work be brought forward, like our good friend Dr. Reichmann here. He has always been very modest about the offices, and I know he would be a good man for vice president.

Mr. Reichmann declined.

Mr. Boyer's motion was seconded, the motion was carried, and the secretary was instructed to cast a ballot for the present vice president.

Mr. REICHMANN. Mr. Chairman, I would like to nominate Mr. Fischer for secretary, and move that the nominations be closed and that he be elected by acclamation.

Mr. PALMER. I second the motion.

The question was taken, and the motion was carried.

Mr. REICHMANN. Mr. Chairman, I move that we proceed with the election of the other members of the executive committee.

The CHAIRMAN. The executive committee consists of four members—Mr. Haskell, Mr. Kjellander, Mr. Thomas, and Mr. Quist—in addition to the officers. How shall we vote for these?

Mr. PALMER. Mr. Chairman, I nominate Dr. Reichmann, of New York, as a member of the executive committee.

Mr. REICHMANN. Mr. Chairman, I am sorry, but I would rather not serve on the executive committee. I personally am not in sympathy with an executive committee that meets down here the day before a conference and fixes up a little program. We want to do more active work. I would rather not serve on the executive committee unless I felt that more could be accomplished by it.

The CHAIRMAN. In order to correct that situation, would not the best way be to put your shoulder to the wheel and help out?

Mr. PALMER. Mr. Chairman, I nominate Mr. Henry, of Vermont, on the executive committee.

The SECRETARY. I second the nomination.

Mr. HENRY. Mr. Chairman, I thank Mr. Palmer and Mr. Fischer for the nomination and for the second, but this is my first year here and I have had very little experience, and for the executive committee I should think it would be better to have some one who has had more experience in weights and measures and has attended the conferences before.

Mr. PALMER. Mr. Chairman, I think that is just the way Mr. Henry will get experience—by meeting with the executive committee and talking matters over. He is active, and he has one of the best State laws there is, and I think he will keep prodding us right along all the time.

The SECRETARY. I nominate Mr. Haskell, of Washington.

Mr. MARONEY. I nominate Mr. Goodwin, of Rhode Island.

Mr. GOODWIN. Mr. Chairman, I beg to be excused. I am not familiar with these subjects, and I would prefer to have some other gentleman elected in my place—the gentleman from Pennsylvania, Mr. Wall, for instance. In declining to serve, I would nominate Mr. Wall.

Mr. WALL. Mr. Chairman, I fell a kind of modesty about this. If we were actively in the harness it would be a different matter, but handicapped, as we are, without a State law, I prefer that you nominate some gentleman from some other State where there is active inspection. We are trying to get that, but we haven't the law.

Mr. PALMER. Mr. Chairman, I move that the nominations be closed.

Mr. MARONEY. I second the motion.

The CHAIRMAN. I may be mistaken, but I have five names.

Mr. REICHMANN. Mr. Chairman, I decline to serve, and that leaves only four.

The CHAIRMAN. If you do not go on the executive committee, then you will have to quit criticizing its actions.

Mr. REICHMANN. No, sir.

Mr. MARONEY. Mr. Chairman, as I nominated Mr. Goodwin and he declined, I will withdraw his nomination.

The CHAIRMAN. That leaves four—Mr. Reichmann, Mr. Henry, Mr. Haskell, and Mr. Wall.

Mr. PALMER. Mr. Chairman, I move that the secretary be instructed to cast a ballot for the four members of the executive committee for the ensuing year.

Mr. GOODWIN. I second the motion.

The question was taken and the motion was carried.

The SECRETARY. It gives me great pleasure to announce that the convention has elected Messrs. F. Reichmann, H. H. Henry, W. C. Haskell, and J. S. Wall as members of the executive committee.

Mr. PALMER. Mr. Chairman, I would like to ask if the bureau has made any plans in regard to the publication of the summaries or the details of the work of the United States inspectors and their visits to the different States. I know they are probably not yet completed, but I would like to know if you intend to publish them at some time. You have authority to publish them, have you not?

The CHAIRMAN. Oh, yes. No doubt a great deal of good will come from the publishing of those reports, and it is our intention to publish them. I could not say exactly as to how extended they will be. We will have to make up our minds as to that after they are all in. We have done this, however: We have felt that it was not right to wait until they could be published in order that any definite locality might get the good of them. We have been furnishing to the various localities the information that concerned those particular localities. It has been rather a difficult matter in some cases for us to bring this before the locality and to place the actual condition before the principal officials without giving offense. We can not always do it, but at the same time we try to be as diplomatic about it as we can. Our desire is to give the proper officers always the first chance—that is, to furnish them their reports first, and let them have ample opportunity to take advantage of them. That we have done from time to time without waiting for the final publication. Now, it is our intention to publish the results of this investigation, but I could not say as to how far it would be wise to go into the details until we have all this matter in hand and have thoroughly digested it and considered its bearing upon the work.

Mr. PALMER. My reason for asking was that it seems to me that in some of these Western States that are attempting to pass legislation and create an interest in this particular work, those reports would be of a great deal of assistance to them if they could be pub-

lished, so that they could have access to them. I know I have tried to get our reports for Massachusetts and have not been successful, but I have been promised. But I am not asking for that reason. I thought some of these western delegates who are interested and who want to get State legislation on this subject would find these reports almost invaluable, because they could make a comparison, or even without making a comparison, could show the true condition in their States as found by Government inspectors.

The CHAIRMAN. We have been furnishing them, and we have been very free in furnishing them; but we do not feel just at present like furnishing to the officer of Wisconsin the data collected in your State or some other State.

Mr. REICHMANN. Mr. Chairman, if I asked for the results of the investigation made in New York City by the Bureau of Standards some two or three months ago, could I get that; and if so, how long would it take for me to get it?

The CHAIRMAN. There is no question but what you could get it as soon as it can be typewritten. I can not say just now whether the inspector has made his report.

The SECRETARY. My clerks have been busy for the last two or three months typewriting the results obtained in the Western States. They are long reports, and the men are doing all they can to get them out. In Mr. Palmer's case I did not consider it urgent compared with other States now considering legislation. There is no reason why you should not get them as soon as the Western States are supplied—those States that are considering legislation—I think we will all admit that the States that are considering legislation are the important States. Pennsylvania is coming into line. That would mean that if there is no change in the program we will have to get busy getting those reports out. California has not yet had its report.

Mr. PALMER. We have 26 matters before our legislature which are to be considered in the next three weeks, and it would have been of very great assistance to me before I came here if I had had my report on the conditions in Massachusetts.

The CHAIRMAN. Let me ask the gentleman if they object in any way to giving the material found in their States to other States?

Mr. PALMER. I do not.

Mr. REICHMANN. Not at all.

The CHAIRMAN. Suppose we do make a thorough investigation of the State of New York; would you be in favor of our publishing that?

Mr. REICHMANN. Absolutely.

Mr. AUSTIN. Will they be furnished to representatives here without request, or will it be expected that they will request the reports for their States?

The CHAIRMAN. We have been waiting for requests for these advance copies. That is, after making this inspection it takes considerable time to get it in order. It must be done by the inspector; it is not a thing that the stenographers and typewriters here can do. The inspector himself must do it. Now, if you want a report on the inspection in your particular locality, make a request for it and we will get it to you as soon as possible.

Mr. AUSTIN. While I am inspector in the city of Detroit, I have been delegated by the governor to represent the State of Michigan here, and I would like at as early a period as practicable to have the report of the conditions found in the State of Michigan; and I would make a request for that. I am satisfied to wait your convenience, but I certainly would like such a report as soon as I could get it.

The CHAIRMAN. You certainly can have it. I assume that your object is to take this material to the governor, or the proper officials, and use it to bring about better conditions?

Mr. AUSTIN. To bring about laws that will be uniform and in compliance with the resolutions here passed.

The CHAIRMAN. As I stated this morning, this inspection was brought about primarily for a different purpose; but it can be used, and we are using it, as you have indicated. The real object of it was this: On several occasions when we have appeared before congressional committees, or when this bureau was asked for advice in regard to legislation (which it is in regard to every bill that comes up on these matters), certain statements were made. These were questioned; especially by the delegates from certain localities. They said that this was the mere assumption of us scientific gentlemen out on the hill. So our object was to get this information first hand, to get information that we knew was right and that we could say did not come through any one else. It was not that we did not feel like trusting any one else at all. Now, we have learned since then that it is equally useful in the way that you have mentioned. There was a great demand for it, and as far as I know we have always supplied it when we could—that is, in a reasonable time. Is not that the case, Mr. Fischer?

The SECRETARY. Yes; we have supplied the reports as fast as we could get them ready in the last three or four months. Up to that point our policy really was not——

The CHAIRMAN. In justice to Mr. Fischer I will say that up to a certain point we did not send these out, simply for fear that they might be used in the way that was not intended—that is, that they would resent any criticisms upon their States, and that it might defeat the very object we were trying to attain. But so far it has not done that. In the cases where we have furnished it we have had

very good results, and I know of but one case where it has been resented.

Mr. GOODWIN. Mr. President, I would like to make a request on the lines of that made by the gentleman from Michigan. I think this criticism, as it may be, or the things brought out by the inspectors of the Bureau of Standards, would give us something to work on. If we are not doing our business intelligently and correctly in the State of Rhode Island, I would like to know it. There are a number of things probably that you could suggest, and did suggest to me while in Providence, R. I., that I have lost sight of, and I would like to get in touch with them again, because if there is anything that would improve our system there I would like to know it and would like to use this as a lever in getting legislation passed to better our conditions.

The CHAIRMAN. Let me ask all of you to remember one thing when we furnish this information: That the investigation was not made at all in the spirit of criticism and was not intended as a criticism; that it was only to get the information first-hand, and that up to a certain point we withheld it for the reason that we were afraid that in those States where they already had inspection they would interpret it as a criticism on the part of the National Government.

Mr. MARONEY. I move we adjourn, Mr. President.

The CHAIRMAN. Just one moment, if you please. The Chair will appoint as the committee in regard to the net weight of containers Mr. Bahrenburg, Mr. Reichmann, and Mr. Austin; and as the committee to examine and report on these bills that we have before us Mr. Palmer, Mr. Holbrook, and Mr. Maroney. I am appointing these committees now because we want the experience of the men who have had a great deal to do with this matter, and several of them have to leave this evening. I hope these committees will get together and formulate their reports, and if they are not here in the morning leave them with the secretary.

A motion to adjourn is in order.

Mr. MARONEY. Mr. Chairman, I move we adjourn.

The motion was seconded and carried; and accordingly, at 6.05 p. m., the conference adjourned until Saturday, February 18, at 10 o'clock a. m.

THIRD SESSION (MORNING OF SATURDAY, FEBRUARY 18, 1911).

The conference reassembled at 10.45 a. m.

The CHAIRMAN. Now, we have several items of business carried over from yesterday, and I think we ought to hear from the two delegates who were not here yesterday. We have New Jersey and Nebraska represented. If it is the wish of the conference, we should like to hear a short statement from each of them. I will call upon Mr. Sullivan, city sealer of Newark, N. J.

Mr. SULLIVAN. I haven't any report to make. There is a bill before the legislature in Trenton creating the office of State sealer, which I believe will go through next week, with one or two little amendments.

The CHAIRMAN. What are the provisions of the bill?

Mr. SULLIVAN. I do not know exactly, but creating the office of State sealer is the main feature. It may be amended.

The CHAIRMAN. That is the point I wish to bring out. A State official is the thing to be desired in every State.

Mr. JACKSON, State dairy and food commissioner of Nebraska, is with us to-day, and I am sure we would like to hear from him.

Mr. JACKSON. Mr. Chairman, I am commissioned by the governor as the delegate here because our legislature is seeking at this time to enact some law that will provide for a State sealer of weights and measures and establish standards. Not having anything very definite in view as to what was needed, it was thought perhaps we might well make use of the law that is in vogue in Kansas at the present time, and so that was practically formulated into a bill, with such modifications as seemed advisable and adapted to Nebraska. But it was the hope of certain members of the legislature that at this conference we might get some light upon the subject, such as would enable us, perhaps, to amend the Kansas bill and make it better adapted to our needs in Nebraska. I corresponded with officials in Kansas, and they admitted that certain things should be changed, and so I came here hopeful that I might take back to our State a bill, or some suggestions at least, from the combined wisdom of this conference that would help us to enact something that would not be too cumbersome, but something that would be thoroughly practicable and workable for our State. I am anxious to look over whatever laws I find in other States. This subject is new with us in Nebraska, and so we are here for light; and I shall appreciate any suggestions

and any warnings as to any shoals that we ought to steer clear of in enacting this legislation.

I do not know whether such questions as this would be suitable to raise, but it has been a question in my mind whether there should be fees charged for sealing scales, etc., or whether the State should do this without any special tax upon the man whose apparatus is inspected. So that is one feature. I suppose in general the legislature would like to see an office of that sort self-sustaining, but it is doubtful propriety, it seems to me; but I am here for light.

The CHAIRMAN. One of the subjects for discussion is a State weights and measures law, and perhaps some of these points will come out in that discussion, which will follow in a few minutes. I should like to ask to what extent the work is organized in Nebraska. What is the provision in the law for a State official?

Mr. JACKSON. The constitution, Mr. Chairman, provides for certain State officers and then provides that no other State office shall be created. In several cases the question of constitutionality has been avoided by appointing deputies; for instance, by making the governor the head of certain departments, and then selecting deputies under him to do the work and be responsible for it. So I suppose the governor would be made the State sealer of weights and measures, and then he would appoint a deputy who would do the work and would be the assistant sealer. That would seem to be necessary, having no authority to create a new State office unless the constitution were amended, and that is a pretty hard thing to do in our State. So it would be necessary for us to enact pretty nearly a whole system of laws. But I think we could repeal just a few sections and make it a straight law from start to finish pertaining to this one subject. There are only a few sections that would need repealing.

The CHAIRMAN. I do not see but what that is susceptible of producing the same results. It would undoubtedly allow the appointment of a definite official having charge of weights and measures, who might be called a deputy. I believe that is the case in some other States. I never knew why it was so before. But it would allow the governor then to appoint such an official without any change of the constitution, as I understand it?

Mr. JACKSON. Yes, sir. There are, I suppose, half a dozen different offices so carried on at present.

Mr. WALL. Why could not you create a bureau and attach it to some department which you already have and let the head of that department appoint a deputy? It would look a little strange to me, from Pennsylvania, to have the governor made State sealer of weights and measures.

Mr. JACKSON. It is simply nominal.

Mr. WALL. You could attach it to some other department, could you not? That is what we are trying to do in Pennsylvania.

Mr. JACKSON. Mr. Chairman, the bill as it is prepared now provides that it shall be attached to some other department, but that department to which it is proposed to attach it has been created by making the governor the official and then the deputy commissioner under him. It was suggested that that officer be the State sealer of weights and measures. Now, that would be tacking on to an office that was created as a secondary office another, which would be unconstitutional, in my judgment. In fact, I submitted the matter to the attorney general, and he agreed with me that it would not be legal to do that. So we get around that in Nebraska by having the governor made nominally the officer and then calling these others deputy commissioners. For instance, there is a deputy fish commissioner, a deputy oil inspector and his assistants, and several other departments. The governor is nominally the head, and these others do the work, have the responsibility, and make their reports to the governor.

The **CHAIRMAN.** Are there any questions that the delegates would like to ask Mr. Jackson? If not, we will pass on to the regular business.

The **SECRETARY.** Mr. Chairman, before we go on with that I would like to get permission to incorporate into our minutes a communication from Mr. William B. Mullen, in which he states that he is very sorry not to be able to be here. He was appointed a delegate from Colorado.

Mr. MARONEY. Do you offer that as a motion, Mr. Secretary?

The **SECRETARY.** Yes, sir.

Mr. MARONEY. I second the motion.

The question was taken, and the motion was carried.

Mr. Mullen's letter is as follows:

DENVER, COLO., February 10, 1911.

Chairman and gentlemen of the Sixth National Conference of State Sealers of Weights and Measures.

GENTLEMEN: If I can not have the pleasure of attending this meeting, I can at least let you know that my heart is with you. I received my appointment from the Hon. John F. Shafroth, governor of the State of Colorado, on the 10th instant, and it was a great surprise, a great pleasure, and a great honor, and I am sorry that I can not attend this conference in person and have the honor of meeting all of you personally, but hope the State of Colorado will have a full-fledged State sealer of weights and measures as the next delegate to the National Conference of State Sealers of Weights and Measures. As I am not the ex officio State sealer, I can not state positively the condition of our State standards, but I have the word of the ex officio State sealer of weights and measures that they are safe and in good condition, for I had him start from the top of the capitol and dig until he finally unearthed them stored away in the basement, and I am in hopes that they will never be put back again, as

I have a bill, which is to be introduced in the present session of the legislature, which, if passed, will create the office of State sealer of weights and measures.

Hoping that the State of Colorado will have a representative at the next conference of State sealers, I am,

Very truly, yours,

WM. B. MULLEN,

Sealer of Weights and Measures, Denver, Colo.

The SECRETARY. I also have a report from Mr. Stimpson, who was appointed to represent the State of Kansas. I merely mention it, and do not ask permission to incorporate it in our minutes, because it is merely his report to the chancellor of the university, who is State sealer of weights and measures.

The CHAIRMAN. Two committees were appointed yesterday, one to pass upon certain State laws to see whether they were uniform or contained the main features of desirable national legislation; the other to draw up a shipping container law. Is it your wish that we take up the reports of these committees now? I think it will take but a moment. We might combine this report of the committee on the State laws with the next subject, the discussion of a State weights and measures law.

Mr. MARONEY. Mr. Chairman, your committee on State legislation is ready to report and has submitted its report to the secretary. There is a separate report on each State, and perhaps it would be better to present them separately and debate them on the floor.

The SECRETARY. I think the reports of those committees would be in order now, Mr. Chairman.

The CHAIRMAN. I think you will find it difficult to separate the report of the committee and the discussion of the model law. The two naturally go together. Unless there is objection, we will proceed on that basis and ask this committee for its report.

The secretary read as follows:

REPORT OF COMMITTEE APPOINTED TO EXAMINE AND REPORT ON STATE LEGISLATION
SUBMITTED.

Your committee has examined a bill submitted to them which is now under consideration in the legislature of the State of Wisconsin, and desires to report as follows:

This committee is unanimously of the opinion that section 1659 should be amended by striking out the words "the dairy and food commissioner shall be ex officio State superintendent of weights and measures" and substituting the words "there shall be a State superintendent of weights and measures, to be appointed by the governor, by and with the advice and consent of the senate. Such superintendent shall be appointed for a term of five years and shall receive a salary of ——— dollars a year." This amendment is considered necessary for reasons which may be found in the debate during the morning session of the first day of the sixth annual conference.

Otherwise, your committee believes that the sections of the bill are excellent ones and should be passed.

Commissioner D. C. Palmer was not present when this report was made, but we believe him to be heartily in sympathy with this action.

Respectfully,

ED. J. MARONEY.
F. S. HOLBROOK.

The bill under consideration is as follows:

SECTION 1. Sections 1662 and 1664 of the statutes are repealed.

SECTION 2. Sections 1658, 1659, 1660, and 1661 of the statutes are amended to read:

SECTION 1658. The weights and measures and the scales and beams received from the United States under a resolution of Congress approved June 14, 1836, and such new weights and measures and scales and beams in addition thereto or in renewal thereof, and such as shall be made under the direction of the State superintendent of weights and measures in conformity therewith, and certified to by the National Bureau of Standards, shall be the State standards by which all county and city standards of weights and measures shall be tried, proved, and sealed.

SECTION 1659. (1) The dairy and food commissioner shall be ex officio State superintendent of weights and measures. The superintendent may appoint two inspectors, who shall receive an annual compensation of \$1,800 and \$1,600, respectively, and their necessary traveling expenses.

(2) He shall take charge of the standards adopted by section 1658 as the standards of the State; cause them to be kept in a fireproof building belonging to the State, from which they shall not be removed except for repairs or for certification; and take all other necessary precautions for their safe-keeping. He shall maintain the State standards in good order and shall submit them once in 10 years to the National Bureau of Standards for certification. He shall keep a seal which shall be so formed as to impress the letters "Wia" upon the weights and measures, scales, and beams sealed by him, and he shall correct the standards of the several cities and counties, and as often as once in 5 years compare the same with those in his possession and shall seal the same when tried and proved to be in conformity to the State standard weights and measures, scales, and beams aforesaid.

(3) He shall have and keep a general supervision of the weights and measures and the weighing and measuring devices of the State and in use in the State. He shall, upon the written request of any citizen, firm, or corporation, or educational institution of the State, test or calibrate weights, measures, weighing or measuring devices, and instruments or apparatus used as standards in the State.

(4) He, or his deputy or inspectors by his direction, shall at least once annually test all scales, weights, and measures used in checking the receipt or disbursement of supplies in every institution under the jurisdiction of the State board of control. And he shall report in writing his findings to such board of control and to the executive officer of the institution concerned; and at the request of such officer, the superintendent of weights and measures shall appoint in writing one or more employees, then in the actual service of such institution, who shall act as special deputies for the purpose of checking the receipt and disbursement of supplies.

(5) He shall keep a complete record of the standards, balances, and other apparatus belonging to the State and take receipt for same from his successor in office. He shall annually during the second week of January make to the governor a report of the work done by his office. The State superintendent,

or his deputy or inspectors by his direction, shall inspect all the standards used by the counties or cities at least once in each two years and shall keep a record of the same.

(6) He, or his deputy or inspectors by his direction, shall at least once in each two years visit the various cities and counties of the State in order to inspect the work of the local sealers; and in the performance of such duties he may inspect the weights, measures, balances, or any weight or measuring appliance of any person, firm, or corporation and shall have the same powers as the local sealer of weights and measures. The superintendent of weights and measures shall issue, from time to time, regulations for the guidance of county and city sealers and the said regulations shall govern the procedure to be followed by the aforesaid officers in the discharge of their duties.

SECTION 1660. The county board of each county and the common council of each city appointing a sealer under this act shall procure at the expense of the county or city and shall keep at all times a complete set of weights and measures, scales, and beams in exact conformity to the public standards, except that they may be made of suitable materials as the superintendent of weights and measures may direct; all such weights and measures, scales, and beams having been tried and accurately proved by him shall be sealed and certified to by the State superintendent of weights and measures as hereinbefore provided, and shall be then deposited with and preserved by the county or city sealer as public standards for the county or city. Whenever the county board or common council of such city shall neglect for six months so to do, the county or city clerk, on notification and request by the superintendent of weights and measures, shall provide such standards and cause the same to be so tried, proved, sealed, certified, and deposited at the expense of the county or city.

SECTION 1661. (1) There shall be a county sealer of weights and measures who shall be appointed by the county board of supervisors from a list to be furnished by the State civil-service board and under the rules of said board. He shall be paid a salary determined by the board of supervisors, which shall not be less than \$1,000 a year.

(2) Where not otherwise provided by law, the county sealer shall have the power within his county to inspect, test, try, and ascertain if they are correct all weights, scales, beams, measures of every kind, instruments or mechanical devices for measurement, and tools, appliances, or accessories connected with any or all such instruments or measurements, used or employed within the county by any proprietor, agent, lessee, or employee in determining the size, quantity, extent, area, or measurement of quantities, things, produce, articles for distribution or consumption offered or submitted by such person or persons for sale, for hire, or award.

(3) He shall, at least twice in each year, as much oftener as he may deem necessary, see that all weights, measures, and weighing and measuring apparatus used in the county are correct. He may for the purpose above mentioned, and in the general performance of his official duties, enter or go into or upon and without formal warrant any stand, place, building, or premises; or may stop any vendor, peddler, junk dealer, coal wagon, ice wagon, or any dealer whatsoever for the purpose of making the proper tests.

(4) Whenever the county sealer finds a violation of the statutes relating to weights and measures he shall cause the violator to be prosecuted. Whenever the sealer compares weights and measures and finds that they correspond or cause them to correspond with the standards in his possession he shall seal or mark the same with appropriate devices to be approved by the State superintendent of weights and measures. The sealer shall condemn and seize

and may destroy incorrect weights and measures and weighing or measuring instruments which cannot be repaired; and such as are incorrect and yet may be repaired he shall mark or tag as "condemned for repairs" in a manner prescribed by the State superintendent of weights and measures.

(5) The county sealer shall keep a complete record of the work done by him and shall make an annual report to his board of supervisors, and an annual report, duly sworn to, not later than the 1st of December, to the State superintendent of weights and measures.

(6) The county sealer of weights and measures shall forthwith on his appointment give a bond, with sureties to be approved by the appointing power, for the faithful performance of the duties of his office and for the safety of the local standards and appliances for verification as are committed to his charge and for the surrender thereof immediately to his successor in office or to the person appointed by the proper authority to receive them.

(7) Nothing in the above shall be construed to prevent two or more counties from combining the whole or any part of their districts as may be agreed upon, with one sealer and one set of standards, and upon the written approval of the State superintendent of weights and measures.

There are added to the statutes two new sections to read:

SECTION 1062. (1) There shall be a city sealer of weights and measures in cities having a population of more than 5,000 inhabitants according to the last official State or United States census, to be appointed by the mayor from a list to be furnished by the State or local civil service board and under the rules of said board. He shall be paid a salary to be fixed and determined by the board or body authorized to determine the salaries of city officials, and no fees shall be charged by him or by the city for the inspection or testing of weights, measures, or weighing or measuring devices. He shall perform in his city the duties and have like powers as a county sealer in a county. In those cities in which no sealer is required by the above, the county sealer of the county shall perform in the said city the duties and have like powers as in the county.

(2) Nothing in the above shall be construed to prevent any county and a city or cities located therein from combining the whole, or any part of their districts, with one sealer, as may be agreed upon, subject to the written consent of the State superintendent of weights and measures.

SECTION 1064. (1) Whoever in any manner whatsoever impersonates or hinders the State superintendent of weights and measures, his deputy or inspectors, or any sealer of weights and measures, in the performance of their official duties shall forfeit not less than \$10 nor more than \$100.

(2) There is hereby conferred upon the State superintendent of weights and measures, his deputy and inspectors, and the county and city sealers of weights and measures, police power; and they are hereby empowered and authorized to make arrests with or without formal warrant of any person or persons violating the provisions of any statute in relation to weights and measures.

SECTION 4. Sections 1665 and 4432 of the statutes are amended to read: Section 1665. (1) The following shall be the legal standard of weights and measures in this State. The avoirdupois pound to bear to the troy pound the relations of 7,000 to 5,760. Whenever either of the articles as commodities in this section mentioned shall be sold by the bushel, or fractional part thereof, and no special agreement as to weight thereof shall be made in writing, the measure thereof shall be ascertained by weight, and shall be computed as follows:

(2) Sixty pounds for a bushel of wheat, peas, potatoes, clover seed, or beans;

(3) Fifty-seven pounds for a bushel of onions;

(4) Fifty-six pounds for a bushel of Indian corn, rye, flaxseed, or rutabagas;

- (5) Fifty-four pounds for a bushel of sweet potatoes;
- (6) Fifty pounds for a bushel of corn meal, rape seed, millet seed, beets, green cucumbers, apples, rye meal, carrots, buckwheat, or fine salt;
- (7) Forty-eight pounds for a bushel of barley or Hungarian grass seed;
- (8) Forty-five pounds for a bushel of timothy seed or rough rice;
- (9) Forty-four pounds for a bushel of hemp seed, parsnips, or sea-island cotton seed;
- (10) Forty-two pounds for a bushel of turnips;
- (11) Thirty-four pounds for a bushel of barley malt;
- (12) Thirty-three pounds for a bushel of dried peaches;
- (13) Thirty-two pounds for a bushel of oats;
- (14) Thirty pounds for a bushel of upland cotton seed;
- (15) Twenty-five pounds for a bushel of dried apples;
- (16) Twenty pounds for a bushel of bran or shorts;
- (17) Seventy pounds for a bushel of coarse salt or lime;
- (18) Eighty pounds for a bushel of unslaked lime;
- (19) Eight pounds for a bushel of plastering hair;
- (20) And two thousand two hundred and forty pounds for a cord of hemlock bark.

(21) For a fractional part of a bushel a like fractional part of the above weights shall be required.

(22) All dry commodities not otherwise specified in this act shall be sold only by standard dry measures, standard weight, or numerical count, except where parties otherwise agree in writing.

SECTION 4432. Any produce merchant, warehouseman, miller, or storage, forwarding, or commission merchant, or any other person who, by himself or by his servant or agent, or as the servant or agent of another, shall use or retain in his possession unless it was so retained without intent to use it or permit it to be used any false weight or measure or any weight or measure or weighing or measuring device to be used in the buying or selling of any commodity or thing which has not been sealed by a sealer of weights and measures within one year; or any person who, by himself or by his servant or agent or as the servant or agent of another, shall sell or offer or expose for sale or keep for the purpose of sale less than the quantity he represents; or who by himself, or by his servant or agent or as the servant or agent of another, shall use any false weight or measure in buying any commodity or thing, or shall sell or offer or expose for sale or keep for the purpose of sale any commodity in a manner contrary to law; or any person who, by himself or by his servant or agent or as the servant or agent of another, shall sell or offer to sell or have in his possession for the purpose of selling any device or machine to be used or calculated to falsify any weight or measure shall be punished by imprisonment in the county jail not more than three months or a fine of not more than \$200 upon a first conviction, but upon a second or subsequent conviction he shall be punished by imprisonment in the county jail not more than one year or by a fine of not more than \$500, or both, in the discretion of the court; or any person who willfully, with intent to cheat or defraud the buyer or seller of electric current, gas, water, or steam, shall make or cause to be made or aid in the making of any electric conductor, gas pipe, water pipe, steam pipe, or other instrument or contrivance or any connection, so as to conduct or supply or intended to conduct or supply electric current, gas, water, or steam to any lamp or motor or machine or burner or orifice or appliance from which such electricity, gas, water, or steam may be consumed or utilized without passing through or being registered by a meter, or any person who shall willfully use a

false meter for the measurement of electric current, gas, water, or steam in the buying or selling of the same, or who shall willfully obstruct or interfere with the working of any meter used for such purposes, so as to cause or be intended to cause a false registration of the amount of electric current, water, gas, or steam consumed, with the intent to cheat or defraud the seller or buyer of such electric current, gas, water, or steam, shall be punished by imprisonment in the county jail not more than one year or by a fine not exceeding \$500; but in case the amount of damages occasioned by such cheat or fraud shall not exceed \$20 he shall be punished by imprisonment in the county jail not more than three months or by fine not exceeding \$100, and in computing the amount of damages occasioned the value of such electric current, water, gas, or steam shall be the regular current price therefor charged to the consumer by the seller thereof.

SECTION 5. This act shall take effect and be in force from and after its passage and publication.

The **SECRETARY**. I would suggest, as a possible explanation, that they were trying to take it out of politics by not making it an even number of years, like all political positions.

Mr. McINTYRE. Mr. Chairman, is that intended to be an indorsement of the bill in detail, or merely of the general principles of the bill? It goes at some length into detail, and are not we, in indorsing this as a whole, more or less acting upon the model bill, which is modeled pretty closely upon the same lines; and if there is to be some criticism upon the provisions of the model bill, would it not be well to let the action on this bill await that discussion? I have not had a chance to look over the model bill; I got about half through and the copy was wanted; but if it follows so closely the other bill, then an indorsement of this would in effect be an indorsement of the model bill as it stands; and if there are criticisms of the details we would like to hear them, so that we can have the action of the conference upon them.

Mr. HASKELL. Mr. Chairman, in order to get the matter under discussion, I move that the report be adopted.

Mr. BOYER. I second the motion.

Mr. MARONEY. Perhaps it would be well to have a word of explanation from the committee as to why they have asked this recommendation. As you all know, at the session yesterday our presiding officer talked of a "side line." In other words, in the original form of the bill the dairy and food commissioner would be using the weights and measures department as a "side line," and your committee agrees with the president that the weights and measures business should not be any "side line;" it should be "it."

Mr. DUNLAP. Mr. Chairman, do I understand that this Wisconsin law is set forth as a model law, with the exception that has been taken by the committee?

The **CHAIRMAN.** No, sir. My understanding is that certain laws were presented to the convention yesterday for discussion, and that

an opinion was asked for with a view to bringing them to a uniform basis, so far as possible. That is the object of the convention, as I understand it—to try to secure uniformity of legislation so far as possible.

Mr. DUNLAP. I would like to inquire why the term is made an odd number of years rather than an even number.

Mr. THOMAS. Mr. Chairman, according to the usual deliberative proceeding, the adoption of this report makes the bill as considered and amended by the committee the model bill of this assembly. I do not know whether that is proper action for us to take or not. I had a copy of the model bill in hand yesterday for a time, and I have not been able to find another one since; and so far as my opinion goes I should be wholly in the dark if I should have to vote on the bill as amended, because I have not read it and do not know what is in it. Another thing, without doubt the Wisconsin bill is drawn with reference to the legal conditions existing in Wisconsin. They are not the same in other States. For example, in Ohio it will be impossible to get an act through the legislature containing this provision for a five-year term. As I understand it, in Ohio the governor has no power to appoint anyone to an appointive office for a term exceeding his own term, because that would interfere with the prerogatives of his successor in office. It would be exceedingly difficult—indeed, I think, as conditions exist, impossible—to carry an appointive provision, such as this, for a term exceeding the governor's. How is that, Mr. Dunlap?

Mr. DUNLAP. That is correct.

The CHAIRMAN. I thought that we would find it very difficult to separate the two questions, but, at the same time, I think the feeling of the convention in submitting this to a committee was that they would look over the bills and call attention to any serious deviations from what we have considered the model bill. I do not understand that the adoption of this report of the committee makes the bill in all respects the one that we would favor as a model bill.

The SECRETARY. I think, Mr. Chairman, it is just a question of accepting the report of the committee. The committee has considered this bill for Wisconsin, not as a general bill; and it is their opinion that it suits Wisconsin. It is a good bill if it suits the Wisconsin people. In other words, as far as this conference is concerned, it approves the bill for Wisconsin. Of course, if it is modified afterwards by the Legislature of Wisconsin, that is another matter. It seems to me that if we are going to get ahead at all in this matter, we must adopt or reject the report. If we can get this out of the way, then we can consider a bill with provisions that will be suitable for every State in the Union. And the same way with the Pennsylvania bill. I am afraid we will not get anywhere if we take up

the question of considering our model bill and trying to make it fit all the States that are represented here at the present time. It is only intended to be a model, and it is expected that it will be modified just as it is proposed in Wisconsin. On the whole, it follows the suggestions contained in our model bill very closely, and the committee that considered this matter, I think, were very competent to consider it and to pick out anything that was seriously defective. The only question before us now that seems to me of any importance is whether we are willing to go on record as accepting the report of our committee.

Mr. DUNLAP. Mr. Chairman, it occurs to me that, if this conference adopts a model bill, that is as far as we ought to go, and the State legislatures can then enact laws as near to it as possible. But if we adopt this, it occurs to me that we are simply adopting the Wisconsin law.

The SECRETARY. I would like to say this, that this was submitted by the delegate from Wisconsin, who wants to get the opinion of this conference.

Mr. GOODWIN. Is the bill a lengthy one?

The SECRETARY. It is quite a long bill.

Mr. MARONEY. Mr. Chairman, as I understand it, the delegates from Wisconsin presented this bill to this conference, and you, as the presiding officer of this conference, appointed a committee to pick flaws in the bill. The committee pointed out one particular flaw in the bill, which was in the nature of substantiating the statement of our presiding officer. The committee does not ask you to adopt this bill; they simply ask you to accept the report of the committee that was sent out by the presiding officer, and I can not see what else you can do with it.

Mr. THOMAS. If you change one word we can act upon it all right; that is, if you substitute "accept" for "adopt."

The CHAIRMAN. Mr. Dunlap, I think the convention agrees with you, at least so far as I have been able to ascertain, in that they feel that we should adopt the one model law, and that it will have to be modified in the various States; that this is a modification of a general law, and that it was submitted to us for an opinion as to whether or not the variations were serious and whether we considered them important.

Mr. HASKELL. I would be glad to change the wording of the motion to "accept" instead of "adopt."

The CHAIRMAN. That would clear the situation a little. Does the second consent to that?

Mr. BOYER. I consent.

The motion was then carried to accept the report.

Mr. THOMAS. Mr. Chairman, the adoption of the amendment which the committee proposed to the bill that is under their consideration is to my mind exceedingly important—the most important action that we can take. I therefore move that the conference adopt, as expressing its opinion, the amendment to the bill proposed by the committee; that is, to make the position of State sealer of weights and measures an independent instead of an attached office.

Mr. HASKELL. Mr. Chairman, I second the motion for the purpose of getting it under discussion.

Mr. THOMAS. I would like to call for the report of the committee again.

The secretary again read the report of the committee.

Mr. HAND. Mr. Chairman, is it not true that this matter is covered in spirit in the model law that we propose to take up in a few moments?

The CHAIRMAN. Yes, sir.

The SECRETARY. The only point, as I understand it, is that the Wisconsin delegate would like to have some expression of opinion on this particular bill. Are we going to give it to him or not?

Mr. MCINTYRE. That is the very point; we would like an expression.

The CHAIRMAN. As I understand it, the adoption of this motion, Prof. Thomas, is nothing more than an expression of opinion that such a change ought to be made in the bill.

Mr. THOMAS. My idea is to make the committee's expression of opinion that of this conference as a whole; that is all.

The CHAIRMAN. I understand. You have heard Prof. Thomas's motion, which was seconded. Are there any further remarks?

The question was taken, and the motion was carried.

The CHAIRMAN. I believe there are one or two more bills.

The SECRETARY. I have the report of the same committee on the Pennsylvania bills. [Reading:]

Your committee has examined two bills submitted to them now under consideration in the Legislature of the State of Pennsylvania, and desire to report as follows:

Inasmuch as the members of the committee are not unanimously in favor of all of the provisions of these bills, and inasmuch as certain contradictions seem to appear, your committee desires to have these bills discussed by the conference as a whole, and be discharged from taking further action upon them.

Respectfully,

ED. J. MARONEY,
F. S. HOLEBOOK.

NOTE.—Commissioner D. C. Palmer was not present when the above report was made and, therefore, did not have the opportunity of expressing his opinion upon this report. It is believed that he was in favor of taking favorable action upon the legislation.

The bills under consideration are as follows:

SECTION 1. That the establishment of a Bureau of Standards be, and is hereby, authorized in the department of internal affairs of Pennsylvania for the purpose of regulating and maintaining a uniform standard of legal weights and measures in this Commonwealth to conform with the original standards of weights and measures as adopted by Congress and verified by the National Bureau of Standards and to assist in securing the enforcement of laws relating to sealers of weights and measures now in force or that may hereafter be enacted.

SECTION 2. That as soon as practicable after the final passage and approval of this act the secretary of internal affairs shall appoint a competent person to serve as chief of the bureau of standards whose duty it shall be to have custody of the State standards of weights and measures; shall compare, test, and regulate all weights and measures of all city and borough sealers now in office or who may hereafter be appointed in the Commonwealth of Pennsylvania with the State standards when presented at his office for that purpose; shall certify to their correctness by affixing his official stamp thereto with his name and date of examination clearly marked thereon; shall preserve in his office an appropriate record of services rendered and work performed by him or under his direction in pursuance of this act; shall file in his office annual and other reports received from the local sealers; and shall, on or before the thirtieth day of November in each year, submit a report in writing to the secretary of internal affairs for publication as a separate document in book form, setting forth in sufficient detail the work done in said bureau and the work reported to him by the local sealers, together with such other matters relating to that subject as may be deemed of value and interest to the citizens of this Commonwealth. The chief of said bureau of standards shall receive a salary of three thousand dollars per annum, payable as other employees of said department are now paid, and all necessary expenses incurred in the discharge of his official duties under this act. The secretary of internal affairs shall also appoint one assistant to the chief of the bureau of standards at a salary of eighteen hundred dollars per annum, and may assign such additional assistance from the clerical force of his department to the work of said bureau as he may find necessary from time to time.

SECTION. 3. That, in order to carry this act into effect, it shall be the duty of the secretary of internal affairs of this Commonwealth to procure, as soon as practicable after the passage of this act, a complete set of standards of weight, length, and capacity, to be verified by the Bureau of Standards of the United States Government and to conform with the standards of weight, length, and capacity established by the National Congress, at a cost not exceeding the sum of two thousand five hundred dollars, to be paid for on warrant of the auditor general out of funds of the State treasury, which sum is hereby specifically appropriated for that purpose, or so much thereof as may be necessary.

SECTION 4. The board of public grounds and buildings are hereby required to furnish a suitable room or rooms in the State Capitol Building for the safe-keeping and convenient use of said standards of weights and measures and for office use of said bureau of standards.

SECTION 5. That the sum of three thousand six hundred dollars is hereby specifically appropriated for traveling and other contingent expenses of said bureau of standards for the two years commencing June first, nineteen hundred and eleven, or so much thereof as may be necessary.

SECTION 1. That the mayor of any or all cities in the Commonwealth of Pennsylvania subject to the approval of the select council may appoint a sealer of weights and measures, who shall be paid out of the city treasury such salary as may be fixed by the councils of the city in which he is appointed, who shall serve for the period of four years unless removed by death, resignation, or otherwise.

SECTION 2. Each sealer shall be furnished with standard weights, measures, and tests of capacity by the city in which he is appointed, such standards being verified by the National Bureau of Standards of the United States. He shall take charge of and safely keep the standards. Where not otherwise provided by law, the city sealer shall have the power within his city to inspect, test, try, and ascertain if they are correct all weights, scales, beams, measures of every kind, instruments or mechanical devices for measurement, and the tools, appliances, or accessories connected with any or all such instruments or measurements used or employed within the city by any proprietor, agent, lessee, or employee in determining the size, quantity, extent, area, or measurement of quantity, things, produce, articles for distribution or consumption, offered or submitted by such person or persons for sale, for hire, or award. He may, for the purpose above mentioned and in the general performance of his duty, enter or go into or upon and without formal warrant any stand, place, building, or premises, or may stop any vendor, peddler, junk dealer, coal wagon, ice wagon, or any dealer whatsoever for the purpose of making proper tests. Whenever the sealer finds a violation of the statute relating to weights and measures, he may seize, without a warrant, such weights, measures, or balances as may be necessary to be used as evidence in case of violation of the law relative to the sealing of weights and measures, and they shall be held until otherwise directed by the court.

SECTION 3. Whoever, himself or by his servant or agent, or as the servant or agent of another person, is guilty of giving false or insufficient weight or measure shall for the first offense be punished by a fine of not more than fifty dollars, for a second offense by a fine of two hundred dollars, and for a subsequent offense by a fine of one hundred dollars and by imprisonment for not less than thirty nor more than ninety days, at the discretion of the court.

SECTION 4. All acts and parts of acts inconsistent herewith are hereby repealed.

The CHAIRMAN. I presume that the convention could hardly discuss this and make an intelligent motion without knowing what some of the provisions are. Will the chairman of the committee state, in a general way, what was the basis of the disagreement or what points were in disagreement in these bills?

Mr. MARONEY. Mr. Chairman, if some of the delegates present will kindly bring the matter before the house to accept the recommendations of the committee and also the recommendation that it be discharged from the consideration of this particular bill, then we can thrash it out and state our reasons, but it is not before us in any shape or form. We are waiting for somebody to take some action.

Mr. GOODWIN. I move that the report of the committee be accepted and that the committee be discharged.

The motion was seconded and carried.

The SECRETARY. I am sorry to say that we have not had time to have these bills copied, so that there are only a few of them available.

The CHAIRMAN. It might facilitate business if you would state in regard to each bill just what the point is, if there is a point for discussion.

Mr. HOLBROOK. Mr. Chairman, one of the main contradictions that appear is that, as I understand it, the bills are correlative, one of which covers the State and one the cities. The city bill requires that every weight and measure used as a standard by a city must be tested and sealed by the National Bureau of Standards. In the second bill a bureau is created, called the State bureau of standards, and the State bureau of standards is required to test and seal all weights and measures used by the cities or boroughs. Therefore, as I understand the bills, both the State bureau of standards and the United States Bureau of Standards are required to test the weights.

The CHAIRMAN. That is, it is a confliction?

Mr. HOLBROOK. Yes. One other objection is that a State bureau of weights and measures is established, and we believe that the powers and duties of that bureau might with profit be more clearly defined. They are very general in their terms, and are defined in such a way that it is very doubtful what the powers and duties of the State bureau shall be.

Mr. BOYER. Mr. Chairman, I will endeavor to answer both the criticisms in a very few words. In the first place, the bill empowering the appointment of sealers of weights and measures in all cities of the Commonwealth of Pennsylvania was prepared and presented to the legislature before the presentation of the bill creating the bureau of standards; so, naturally, wishing to have our weights standardized by some reliable concern, we put that duty upon the National Bureau of Standards. Naturally, if the bill providing for a State bureau of standards goes through, we will expect the State to do that work, and the bill will be so amended.

I wish to say to the members of the conference that we folk want to creep before we walk. You will agree with me that the law of the State of Pennsylvania in regard to weights and measures is very flimsy; and we wish to get the bureau of standards created in that State for the purpose of making a series of investigations; to form a commission, as it were, to go through the State and find out what we need in the way of laws governing the weights and measures, and possibly at the next conference of the sealers of weights and measures of the country we may present another bill for your consideration. We are not looking for a model bill now; we are trying to get around the constitution, which provides that no office shall be created to superintend the weighing of merchandise, etc., unless otherwise authorized by law. With these two meager bills we are attempting

to get that authority, and I certainly hope, gentlemen, that you will see your way clear to give us the indorsement we ask.

Mr. HOLBROOK. Mr. Chairman, the reason the committee desired to be discharged was simply to obtain the statements as to the reasons for these things—on the floor—and, moreover, the committee did not see its way clear to recommend the adoption by this conference of two bills which did conflict in their terms, as in that case there probably would have been no discussion upon them.

Mr. MARONEY. Mr. Chairman, I think we can straighten this out. One of these bills provides that there shall be a bureau of standards authorized in the department of internal affairs of Pennsylvania, "for the purpose of regulating and maintaining a uniform standard of legal weights and measures in this Commonwealth to conform with the original standards of weights and measures as adopted by Congress and verified by the National Bureau of Standards." The other bill provides that "each sealer shall be furnished with standard weights, measures, and tests of capacity by the city in which he is appointed, such standards being verified by the National Bureau of Standards." Then, in section 2 of the first bill, the National Bureau of Standards is ignored altogether, and this duty of testing the city standards is placed upon the State bureau.

The CHAIRMAN. That is a matter that can easily be corrected.

Mr. BOYER. Possibly there are other things that we will have to alter. Our object is this: We would like to get the sense of this conference in regard to the merit of our endeavor; we want to get some law in Pennsylvania, and we want you to help us.

The SECRETARY. Mr. Chairman, I would like to state at this point that in all probability there will be a bill introduced into the Legislature of Pennsylvania that will be very much more along the lines that we have in mind here than this bill. Now, if we give this bill our indorsement, what is going to become of the people who are going to try to put in a bill along the lines we have recommended right along in the Western States, and all over the country?

Mr. HOLBROOK. Mr. Chairman, I would say to Mr. Fischer that, as I understand it, there have been several bills introduced in Pennsylvania already, and another reason for throwing it open to the action of the conference was to determine whether any other of these bills met the requirements of the specifications issued by the conference some years ago.

The SECRETARY. I know there is going to be a bill introduced by the municipal research people in Philadelphia, and I think Mr. Livingston and some friends of his in Pittsburgh are going to introduce a bill along these lines.

Mr. HOLBROOK. It appeared to the committee that to accept one bill without the consideration of any other State bills introduced,

especially when the bill was very general in its terms, was rather poor policy on the part of the conference. It seems to me that if all the bills could be presented here, or if some of the delegates from Pennsylvania could tell us in a few words what the other bills contemplated, the conference would be in a better position to act on the matter.

Mr. BOYER. Mr. Chairman, there is only one thing that I can notice in all this discussion. Some representatives here are speaking about something that is going to happen. We folk ask you to take action on something that has happened. These bills were introduced simultaneously into both houses of the Legislature of Pennsylvania by Senator John E. Fox and Hon. William Tunis. Those bills are in committee. You folk are saying here that some bills are going to be presented. There may be some at the next legislature; I do not know. A bill has been presented from the western part of the State which is almost identical with our bill creating a bureau of standards. The only difference is that that bill authorizes the secretary of internal affairs to purchase from the United States Government a set of standards, but does not authorize any person to take charge of them after they come into possession of the State.

The CHAIRMAN. There is no question, as I understand it, formally before us. This motion to accept was passed in the other case. I do not see any objection to taking action in regard to this, provided it is perfectly clear that the bill does not disagree seriously with the provisions that you would like to see in a general bill—that is, if it is all right as far as it goes. Certainly the one point mentioned by Mr. Holbrook should be corrected, and that is a simple matter. But is there anything else in this bill that disagrees with the provisions of the general bill? I think we ought to have the freest discussion in regard to this.

Mr. GOODWIN. Mr. Chairman, as I understand it, the gentleman from Pennsylvania says that the bill provides that paraphernalia shall be purchased from the National Government. That is not necessary, is it? The Government furnishes standards to each and every State, as I understand it.

The CHAIRMAN. It would be necessary, just at present.

Mr. BOYER. That provision is not in the bills that we are discussing now. That is in another one.

Mr. GOODWIN. I can not see that this affects any State. If it is any advantage to the State of Pennsylvania to help sealing matters along, I think we had better adopt a resolution.

The CHAIRMAN. Is it the wish of the convention to dispose of this bill in any way? If so, a motion will be in order.

The SECRETARY. It seems to me that if we take any action on these bills we are committed to them. There has been a good deal of work

done in Pennsylvania, and there are people there, I know, who are going to introduce bills that will be better than this—at least, I feel that they are going to be better. I think they are going to go further and attempt to establish the office somewhat along these lines that we have been working on. The only thing that they have to look out for, of course, is this constitutional requirement. Now, as I stated before, if we indorse this our hands are tied; the Bureau can not take any further action. I would not feel like going up there and talking for another bill if I were asked to do so, and Dr. Stratton gave me permission to go. I am very sorry indeed to appear to be opposing anything that would help matters there in the State.

Mr. MARONEY. Mr. Chairman, is there a motion before the house?

The CHAIRMAN. No, sir.

Mr. MARONEY. Then, to be consistent and not be in conflict with the ideas that Mr. Fischer has put forth, and at the same time go on record as favorable to what our friend from Pennsylvania wishes, I move, sir, that our secretary be instructed to write a letter to the judiciary committee of the Legislature of Pennsylvania, stating that this conference goes on record as favoring a State superintendent of weights and measures, and any other provisos that our friend who introduced the bill wants attached to it; I think that covers the ground thoroughly, and we are not committed to any particular bill, and at the same time we stand in line to recommend later the adoption of this model bill that this bureau is trying to put forth.

Mr. AUSTIN. I second the motion.

The CHAIRMAN. Is there any further discussion on the motion?

Mr. MCINTYRE. Mr. Chairman, that motion as it reads is that we go on record in favor of a State superintendent of weights and measures, and any other recommendations which the delegate chooses to add. Now, the conference can not consistently indorse in advance recommendations which it does not know. Why could it not be amended so as to favor the creation of a State department of weights and measures in Pennsylvania? It will put the conference in a bad light if it indorses recommendations before it knows what those recommendations might contain.

The CHAIRMAN. I think you gentlemen both agree. I think we ought not to make that quite so broad.

Mr. MARONEY. My only object was to give the opportunity to the gentleman from Pennsylvania to add the assistants or deputies. I did not know how many he contemplated having incorporated in the bill.

Mr. BOYER. Mr. Chairman, that bill is supposed to go through just as it stands; and there are two positions created, a superintendent and one clerk. We expect those two men, within the next two years,

to codify the existing laws and add anything that may be necessary to present to the next legislature.

Mr. MARONEY. Then, to satisfy both gentlemen, I will put the motion in the form of "a superintendent and a clerk"—that this conference go on record as favoring a superintendent of weights and measures and a clerk for Pennsylvania—and withdraw the rest of the amendment, with the permission of the gentleman that seconded that motion.

The question was taken, and the motion was carried.

The ACTING CHAIRMAN (Mr. Fischer). The chairman has been informed that Secretary Nagel is here, and he has gone out for a moment to meet him.

I have a report to make. I was instructed to make a report for the committee on net-weight containers, which met very late last night. I am sorry to say that I have not any copies of the bill that we agreed on, but it is being typewritten. I did not get it in the hands of the typewriter until this morning, but you will be furnished with copies later. I might state that it is along the lines of the three sections of the model State law which Dr. Reichmann presented yesterday. It provides for fixing the size of the barrel, third of a barrel, bushel, etc., and the multiples, and also permits other odd sizes to be used provided they have the net capacity marked on the outside. I would like to take that up later if we have time and when I can furnish the members with copies of the bill. It will necessarily be defective, because it was very hurriedly gotten up, and it will have to be discussed more or less in general terms.

I do not know that we will have time to take up anything else, but it seems to me at this point the next thing in order would be to take up the State weights and measures law. I am sorry to say that, although I had 20 copies of that made yesterday, only a few of them can be found this morning. It is going to be very difficult, of course, to follow this without having copies of the bill. We are having more copies made, but I imagine it will be an hour or so before we can get them. I would like to know what your pleasure is in regard to this matter.

Mr. McINTYRE. Could not that be taken up section by section?

The ACTING CHAIRMAN. I think so, if that is satisfactory. At any rate, we might take it up that way until the other copies arrive; but I thought it would not be very satisfactory for the members to consider it without having copies before them.

Mr. MARONEY. Mr. Chairman, I move that a reading clerk be appointed, and that we take up this matter section by section.

The motion was seconded and carried.

The ACTING CHAIRMAN. I would like to have nominations now for reading clerk.

Mr. MARONEY. I move that the Chair appoint a reading clerk.

The motion was seconded and carried.

The ACTING CHAIRMAN. I appoint Mr. Maroney, then.

Mr. MARONEY. I seem to have got myself into trouble.

Mr. Maroney thereupon read section 1 of the bill, as follows:

MODEL UNIFORM REGULATIONS FOR STATE LEGISLATION ON THE SUBJECT OF WEIGHTS
AND MEASURES.

SECTION 1. The weights and measures received from the United States under a resolution of Congress approved June 14, 1836, and such new weights and measures as shall be received from the United States as standard weights and measures in addition thereto or in renewal thereof, and such as shall be supplied by the State in conformity therewith and certified by the National Bureau of Standards, shall be the State standards, by which all county and municipal standards of weights and measures shall be tried, proved, and sealed.

Mr. DUNLAP. Mr. Chairman, I move the adoption of that section.

The motion was seconded.

The ACTING CHAIRMAN. Is there any discussion?

Mr. HENRY. Mr. Chairman, in that section it states that these State standards shall be the standards by which all county and municipal standards of weights and measures shall be tried, proved, and sealed. Should not that include other measures in the State aside from county and municipal standards?

The ACTING CHAIRMAN. It does not state that it shall not, does it?

Mr. HENRY. The way the section is worded, does it not exclude other standards?

The ACTING CHAIRMAN. I do not understand that it does.

Mr. HENRY. That is the way it appeared to me. I think it ought to be stated in that section that commercial apparatus may be approved by the State standards. I may be wrong, but from the reading of that section it would appear that all the sealing must be done by the municipal and county authorities.

The ACTING CHAIRMAN. I think that is covered in another section. At any rate, if you want to introduce another section covering that, it might be introduced later. As a matter of fact, that first section does not prescribe all the duties of the sealer. The bill is just full of duties; and I think that is practically the law that Dr. Reichmann is operating under at the present time.

Mr. MARONEY. The State superintendent is de facto sealer of weights and measures in any town where there is no official, if that is what you are getting at; and if he seals standards in a town where there is already a sealer he is going over that man's head, and if he went over mine there would be trouble.

Mr. HENRY. Yes; but whether or not there is any conflict between the State and municipal or county authorities, the standard of the

commercial apparatus should be legalized by comparison with the State standards; that is the point.

Mr. MARONEY. According to Mr. Fischer, that is taken care of later in this bill.

Mr. HOLBROOK. Mr. Chairman, I should say that the State standards themselves should never be used in the testing of commercial apparatus, which seems to be the point Mr. Henry makes. Copies of the State standards may be sealed by means of the State standards, and these, as is specified later in the bill, may be used in checking up the weights and measures of any county, town, or city. But the idea of using the State standards themselves for the testing of commercial apparatus seems to be a very poor one. Moreover, the State standards are required to be kept in a building belonging to the State, from which they shall not be removed, which would effectively prevent any apparatus being tested by them.

The CHAIRMAN. Gentlemen, let me interrupt your discussion at this point. I told you yesterday what I thought of the interest that the secretary of our department is taking in the weights and measures movement. Our secretary could not be with us yesterday, but he has left the many duties that he has (and I can assure you that there are a great many) to come out and be with us this morning for a short time. I take great pleasure in introducing Secretary Nagel.

Mr. NAGEL. Gentlemen, I have come merely to testify to my interest in this movement. I did that last year, and to-day I can only say that my interest is in no sense abated. On the contrary, I am more than ever impressed with the significance of what you and this bureau are engaged in doing.

So far as the importance of common standards is concerned I take it that we have passed beyond the field of doubt. That it touches upon a phase of life in which the individual can not defend himself, and in which, therefore, the Government must come to his support, I imagine is beyond question. It is so with the quality of products, and it must be equally true of the quantity of products.

Last year we spoke more especially of the position of the consumer; and of course his relation to and his interest in the subject is manifest. It has seemed to me since then that perhaps in a broader field the insistence upon standards may become more and more important. In other words, they play a part in the general demand for the "rules of the game." If it is just in commerce that every shipper should have equal treatment from a common carrier, then it must be just also that in competition between several industries all of them should maintain a common standard, at least as to quantity. If that quantity is not the same, then there is no such thing as fair competition. And, after all, the rules of the game, which the Gov-

erninent seeks to enforce, make for a fair opportunity and for a fair chance to everyone in the field.

It seems to me that these propositions are self-evident when we state them, and it is not my purpose to detain you here with an argument upon a subject with which you are more familiar than I can possibly be.

I am also more and more impressed with the significance of the cooperation which you are furnishing here between a department of the National Government and the representatives of individual States. To my mind it is a most hopeful manifestation of governmental activity. As you know, since the beginning of our Government there has been continued dispute as to the jurisdiction of the respective sovereignties—that is, the National Government and the State authorities. To my mind, we have wasted much time in seeking to define just where one jurisdiction ends and the other begins. We ought to recognize that large field of governmental action where the two jurisdictions, instead of quarreling for possession, should join hands for intelligent cooperation. Nothing is so essential to the success of the dual system of government for which our Constitution provides; and perhaps few people know that the Supreme Court of the United States, in seeking to help solve these great questions, has again and again pointed out that the only solution lies in an intelligent and patient cooperation of the two authorities in a common field of action.

Now, in my judgment, you are providing one of the most persuasive proofs of the possibility of such cooperation. If you did nothing for the consumer, if you did nothing else than demonstrate to the general public that this thing can be done by patient, tolerant, reasonable discussion, exchange of views, and official cooperation, you would have served, to my mind, a tremendous purpose in this country.

Now, what does cooperation mean? I shall not undertake to define it, but I shall be content to call your attention to the fact that the National Government must not assume to do too much. Very few people appreciate how tremendously the activity of the National Government has grown in the last 25 years. We speak of the enormous extravagance of the Government. You would not think so if you contemplated how tremendously the activities of every department of Government have been extended. It is amazing. And while I am a nationalist, and while I believe that the National Government ought to grapple with every truly national problem, I also believe, on the other hand, that the integrity of State authority is an absolute condition to the success of this common Government; and therefore I would not want the activity of the National Government, through the Bureau of Standards, to exceed its rational and proper

domain. I would want to encourage as far as possible the fearless proceeding on the part of the bureau, in so far as it is called legitimately into action, but I would want to count on the enforcement of the standards that we fix by State authority. So, it seems to me, it ought to be; and that, it appears to me, you are doing. The standard must be common to the whole country; therefore the Government of the whole country must fix it. The enforcement of that standard may well be left to the representatives of the individual sovereignties. It will be so in a larger scope before long.

The relations between entirely foreign countries are becoming closer and closer. The spirit of toleration and exchange is growing. The promise of peace rests upon that foundation, and as that exchange becomes more and more free, all civilized countries will have to agree, by treaty or otherwise, upon common standards. And yet, when those standards have been agreed upon, for competition with each other, the enforcement of those standards must, of course, be left to the respective governments themselves.

Now, of course, to make standards we have to make inquiries. That is proper. Investigations and inquiries ought to be made for our information. The results of those investigations must be carefully used. If they are in our possession, and the representatives of individual States want to know what these standards are, they ought to have them, in order that they may pursue the legitimate purpose of their offices. But when it comes to the bureau's use, we must be careful, because the National Government, working with national funds, dare never get into the position of making a report upon one State at the possible expense of another State. That will not do. Whenever we make a report we must make one that covers every State in which like conditions obtain. Otherwise, our report may be partial, subject to criticism and complaint. We dare not get into that position. In other words, we must leave the use of the information, if it is to be employed in individual States, to those representatives of the States who are in a position to employ that information.

That is equally true in other bureaus. I would insist upon that at every stage. We have just spent a large sum in the investigation of woman and child labor. That covered several years. Suppose we had published the results of our investigations in an individual State and had not done it with respect to other States. What would have been the consequence? Complaint and discord. In order to do what the National Government ought to do, we should make a just report as between the several States; a comprehensive report as to all of them. To allow for the institution of comparisons, we should make a report which embraces, at one and the same time, every State in which one kind of condition is common. That is the purpose of national government. We could not do anything else.

We do not single out North Carolina or Massachusetts, but we report upon North Carolina and Massachusetts and every other State of like condition. If we inquire into the cotton industry, we take every State in which there are cotton factories, and make a common report, in order that it may address itself to the patient consideration and the impartial judgment of every citizen of the United States. That is my position, and I should be surprised if Dr. Stratton took any other. Whatever information we have is at the disposal of everybody. My desire is to have this bureau do nothing that is not absolutely necessary, in order that the field of action for the individual States may be left as broad as possible. Because, to repeat, one danger which is confronting us in this country now is that the State activity will be neglected; and the neglect of the State to use its opportunities has been during the last 10 or 15 years the most potent inducement for national assumption of authority. I say that, although I believe in national authority. Still, I advocate it used only for national problems and would insist that wherever the national authority is not needed the State should be left to solve its own problems. In other words, to conclude, I believe to-day what James Wilson said when the Constitution of the United States was submitted. Every State must be left to do everything that it can do. But this is one government, and when the State is not able to meet a problem because that problem assumes a national character, then it is time for the National Government to step in and meet the situation.

The ACTING CHAIRMAN (Mr. Fischer). We now have a few copies of our so-called "model law," which will be distributed.

Mr. HENRY. Mr. Chairman, I misunderstood this section a little, and I would like to know if this section means that the county and municipal standards shall be tried, proved, and sealed by comparison with State standards themselves, and not by comparison with any secondary State standards. If so, then that clears the thing up in my mind.

The ACTING CHAIRMAN. That is, whether they can be compared with secondary standards or must be compared with the State standards?

Mr. HENRY. Yes. If this means that they must be compared with the State standards and can not be compared with secondary standards, then, of course, it should be as it is. As I understand it at the present time, a State office does not necessarily use, strictly speaking, the State standards; it uses secondary standards, does it not?

Mr. MARONEY. Certainly.

The ACTING CHAIRMAN. I do not think the State commissioner ought to be required to use any particular weights when he is comparing standards. It seems to me it ought to be left to his discretion

as to when he uses State standards and when he uses secondary standards, which he may know are just as good. I had never thought of that interpretation being put on it. I see the point that you are raising. You will notice the bill provides for all other standards, for example, secondary standards. While they will not be supplied by us, they will be sealed by our bureau, and they will be the ones, I should think, that might well be used in testing county and municipal standards. I do not think it requires the use of State standards for any specific purpose; that is, when I say "State standards" I speak of the fundamental standards. It reads, "and such new weights and measures as shall be received in addition thereto." That might include a second set, you see.

Mr. HENRY. Yes.

Mr. MARONEY. Question on the motion, Mr. Chairman.

The question was taken and the section was adopted.

Section 2 of the bill was then read by Mr. Maroney, as follows:

SECTION 2. There shall be a State superintendent of weights and measures, who shall be appointed by the governor by and with the advice and consent of the senate. Such superintendent shall be appointed for a term of five (four) years and shall receive a salary of ——— dollars a year. There shall be a deputy superintendent of weights and measures and inspectors of weights and measures, the deputy to be appointed by the superintendent of weights and measures and to hold office during the superintendent's term of office; the inspectors to be appointed from an eligible list prepared by the Civil Service Board and under the rules of said board. The superintendent of weights and measures shall be allowed for salaries for the deputy superintendent of weights and measures, inspectors of weights and measures, clerical services, traveling and contingent expenses for himself, his deputy, and inspectors such sums as shall be appropriated by the legislature.

Mr. MARONEY. Mr. Chairman, I move the adoption of the second section.

The motion was seconded.

Mr. BOYER. Mr. Chairman, it seems to me that it would be a wise provision if the term of office were eliminated; that is, instead of being five years, and four, in parentheses, there should be a blank, leaving it subject to the conditions of the State wherein the laws are being passed.

Mr. HOLBROOK. Mr. Chairman, I believe that it is advisable to suggest some term, in order that the conference may go on record as favoring a longer term than the average one, the usual two-year term of the governor of the State.

Mr. GOODWIN. Mr. Chairman, the only thing that would prevent me from recommending the adoption of section 2 would be the fact that it says "there shall be a deputy superintendent of weights and measures and inspectors of weights and measures." Now, every city and town in my State, according to the law, has to appoint

sealers of weights and measures, and they come under the jurisdiction of the State sealer. The State sealer's term of office is five years and the term of the subordinates is one year. There is nothing in our law that would compel us to appoint deputies, and there is nothing that would give the right to do so.

The ACTING CHAIRMAN. You do not understand, Mr. Goodwin, that we are trying to enact this in place of any existing State law?

Mr. GOODWIN. No; this is a general law for all the States alike, as I understand it.

The ACTING CHAIRMAN. Yes. If you have an existing law, it may not conform to this.

Mr. GOODWIN. That is why I say that I can not consistently support it, because it conflicts with the law in my State, which I believe is a very good and concise law.

The ACTING CHAIRMAN. This is intended to be a recommendation for the States which are going to adopt laws and those which wish to change their laws.

Mr. GOODWIN. Oh, I see. I did not so understand it. Of course, in that case, I will be glad to help it along.

The question was taken and the section adopted.

Section 3 was then read by Mr. Maroney, as follows:

SECTION 3. The superintendent of weights and measures shall take charge of the standards adopted by this article as the standards of the State, and cause them to be kept in a fireproof building belonging to the State (or in a safe and suitable place in the office of the superintendent), from which they shall not be removed except for repairs or for certification, and he shall take all other necessary precautions for their safe-keeping. He shall maintain the State standards in good order and shall submit them at least once in 10 years to the National Bureau of Standards for certification. He shall at least once in two (five) years try and prove by the State standards all weights, measures, and other apparatus which may belong to any county or city, and shall seal such when found to be accurate by stamping on them the letter "—" and the last two figures of the year with seals which he shall have and keep for that purpose. He shall have and keep a general supervision of the weights, measures, and weighing and measuring devices offered for sale, sold, or in use in the State. He shall, upon the written request of any citizen, firm, corporation, or educational institution in the State, test or calibrate weights, measures, weighing or measuring devices, and instruments or apparatus used as standards in the State. He, or his deputy or inspectors by his direction, shall at least once annually test all scales, weights, and measures used in checking the receipts or disbursements of supplies in every institution for the maintenance of which moneys are appropriated by the legislature, and he shall report in writing his findings to the supervisory board and to the executive officer of the institution concerned, and, at the request of such board or executive officer, the superintendent of weights and measures shall appoint in writing one or more employees then in the actual service of each institution who shall act as special deputies for the purpose of checking the receipts or disbursements of supplies. He shall keep a complete record of the standards, balances, and other apparatus belonging to the State and take a receipt for same from his

successor in office. He shall annually, on the 1st day of ———, make to the governor a report of the work done by his office. The State superintendent, or his deputy or inspectors at his direction, shall inspect all standards and apparatus used by the counties and cities at least once in two years and shall keep a record of the same. He, or his deputy or inspectors at his direction, shall at least once in two years visit the various cities and counties of the State in order to inspect the work of the local sealers, and in the performance of such duties he may inspect the weights, measures, balances, or any other weighing or measuring appliances of any citizen, firm, or corporation, and shall have the same powers as the local sealer of weights and measures. The superintendent shall issue from time to time regulations for the guidance of county and city sealers, and the said regulations shall govern the procedure to be followed by the aforesaid officers in the discharge of their duties. The State superintendent of weights and measures shall forthwith, on his appointment, give a bond in the penal sum of \$5,000, with sureties, to be approved by the governor for the faithful performance of the duties of his office and for the safety of the standards intrusted to his care, and for the surrender thereof immediately to his successor in office or to the person appointed by the governor to receive them. The deputy superintendent of weights and measures and each inspector of weights and measures shall forthwith upon his appointment give a bond in the penal sum of \$1,000, with sureties, to be approved by the secretary of state or attorney general, for the faithful performance of the duties of his office and for the safety of any apparatus intrusted to his care.

Mr. MARONEY. I move, sir, that the section be adopted as a whole. The motion was seconded.

Mr. HOLBROOK. Mr. Chairman, I would say that there seems to be a misprint here. The bond of the superintendent and that of the deputy should be approved by the same official. In one case the bond is to be approved by the governor of the State, and in the other by the secretary of state or the attorney general. It might be any one of those three officers, conforming to the general practice in the State.

The **ACTING CHAIRMAN (Mr. Thomas).** I imagine that other States may be in the condition of Ohio, in which the approval of official bonds is under one person designated by law. This section, of course, would be amended to conform to the State laws in that regard.

Mr. GOODWIN. Mr. Chairman, I merely wish to state to the delegates that in my State there is no bond required. The responsibility is provided for, but there is no bond required for the execution of the work, and I merely suggest that, in my opinion, it is not absolutely necessary to have this provision of law.

Mr. HOLBROOK. Mr. Chairman, there is another thing to which I would like to call attention, which is in the nature of a typographical error. The section provides that the superintendent "shall at least once in two (five) years try and prove by the State standards all weights and measures and other apparatus which may belong to any county or city." I would suggest that "standard" be put

before "weights and measures," since there might be a number of sets for various purposes, in the fire department, for example, which would belong to the county or city and yet which would not necessarily be sealed by the State standards. I would say, "any standard weights or measures which may belong to any county or city."

Mr. McINTYRE. Mr. Chairman, there is one clause here which carries the power of the State sealer rather far. It reads, "and shall have the same powers as the local sealer of weights and measures." There might arise some conflict of authority from that clause. The authority to prosecute for violation of the law, which is given in another section, ought to cover all the power which the State sealer would require in the city. In Wisconsin, for instance, that law would be unconstitutional. The local duties are protected to the municipality, with the idea that they should be performed by the municipality, and it seems to me that the State sealer's power is pretty fully covered in the section, aside from that clause.

Mr. WALL. Mr. Chairman, in Pennsylvania we have cities, boroughs, and counties. We have boroughs in Pennsylvania larger than some cities for the reason that they have never taken advantage of organizing city governments. I come from a city in Pennsylvania which could not become a city under our new constitution, for we have not yet quite 10,000 inhabitants. When you mention cities and counties, I think you ought to include boroughs. Boroughs have their organizations the same as cities, and with distinctive boundaries.

Mr. GOODWIN. Mr. Chairman, regarding that clause about the duty of the superintendent to go into a town or county and have the same rights and privileges as the local sealers, I think it works well. The State sealer in my State has all the authority vested in the local sealers, and it is an advantage, because in case he finds that one of his subordinates is not doing his duty as he should, he has authority to do it himself, if necessary. There is no law that gives him the right to appoint a deputy to do it. We hope to be able to change that in the very near future. It is one of the worst things with which I have had to contend. In remote sections of the country, where there is not much sealing to be done, the sealer is sometimes indifferent to his duties. As State sealer I have the privilege of attending to that duty, and I think that is a very good thing about this law.

The CHAIRMAN. Are there any further remarks?

The question was taken and the section adopted.

Section 4 was then read by Mr. Maroney, as follows:

SEC. 4. The board of county commissioners of each county and the common council of each city required to appoint a sealer under this act shall procure at the expense of the county or city, and shall keep at all times, a complete set of weights and measures and other apparatus of such materials and construc-

tion as the said superintendent of weights and measures may direct. All such weights, measures, and other apparatus having been tried and accurately proven by him, shall be sealed and certified to by the State superintendent as herein-before provided, and shall be then deposited with and preserved by the county or city sealer as public standards for such county or city.

Whenever the board of county commissioners of a county or the common council of such city shall neglect for six months so to do, the county auditor of the county, or the city clerk or comptroller of said city, on notification and request by the superintendent of weights and measures, shall provide such standards and cause the same to be tried, sealed, and deposited at the expense of the county or city.

Mr. BOYER. Mr. Chairman, I move the adoption of this section.

The motion was seconded.

Mr. BOYER. I would like to ask a question, please, Mr. Chairman. Why is the term "common council" used?

The CHAIRMAN. I believe that is a term that is used in some places.

Mr. HOLBROOK. Mr. Chairman, I would say that a large number of these words could be put in brackets, such as "the board of county commissioners." That is a term used in some States for "the board of supervisors." A county auditor will often be called a county clerk, etc. All through this bill we are simply specifying the kind of board that we desire to have mentioned, without reference to its specific name.

Mr. BOYER. I merely wanted the information. In my State all appointments are confirmed by the select council, and I was wondering if there was any good reason for using the other term.

The CHAIRMAN. It is a general term.

Mr. WALL. This would include boroughs in Pennsylvania, would it?

The CHAIRMAN. That could be covered in your law by adding the word "borough" after "city."

Mr. WALL. Yes.

Mr. MARONEY. Mr. Chairman, there seems to be a misapprehension here, that we have, in adopting these sections as they are, bound ourselves and bound the whole country, States and everything else, to this law just as it is, without revision by the local people to whom it is to be submitted. In answer to Mr. Wall, section 4 could read "the board of" and anything that he wants to substitute—borough commissioners, county commissioners, or city commissioners. In the East the term "common council" is used, and practically every part of the country has a different idea and description of what their governing board is. It is simply a question of substituting something else for the term we have used. You might leave it blank and fill it in. To facilitate matters, as we have a lot of work to do to-day and have to get through with it, I would suggest that there be as little of this discussion as possible, so that we can get through.

The CHAIRMAN. Are there any further remarks?

The question was taken, and the section was adopted.

Section 5 was then read by Mr. Maroney, as follows:

SECTION 5. There shall be a county sealer of weights and measures in each county, who shall be appointed by the board of county commissioners for a term of five years. He shall be paid a salary determined by such board, said salary not to be less than \$1,000 a year, and no fee shall be charged by him or by the county for the inspection, testing, or sealing of weights, measures, or weighing or measuring devices. Where not otherwise provided by law, the county sealer shall have the power within his county to inspect, test, try, and ascertain if they are correct, all weights, scales, beams, measures of every kind, instruments or mechanical devices for measuring, and tools, appliances, or accessories connected with any and all such instruments or measures kept, offered, or exposed for sale, sold, or used, or employed within the county by any proprietor, agent, lessee, or employee in proving the size, quantity, extent, area, or measurements of quantities, things, produce, articles for distribution or consumption offered or submitted by such person or persons for sale, hire, or award; and he shall have the power to, and shall from time to time, weigh or measure packages or amounts of commodities of whatsoever kind kept for the purpose of sale, offered for sale, or sold, or in the process of delivering, in order to determine whether the same contains the amount represented, and whether they be offered for sale or sold in a manner in accordance with law. He shall at least twice each year, and as much oftener as he may deem necessary, see that the weights, measures, and all apparatus used in the county are correct. He may, for the purpose above mentioned, and in the general performance of his official duties, enter and go in or upon, and without formal warrant, any stand, place, building, or premises, or stop any vendor, peddler, junk dealer, coal wagon, ice wagon, delivery wagon, or any dealer whatsoever, and require him, if necessary, to proceed to some place which the sealer may specify for the purpose of making the proper tests. Whenever the county sealer finds a violation of the statutes relating to weights and measures, he shall cause the violator to be prosecuted. Whenever the sealer compares weights, measures, or weighing or measuring instruments and finds that they correspond or causes them to correspond with the standards in his possession, he shall seal or mark such weights, measures, or weighing or measuring instruments with appropriate devices, to be approved by the State superintendent of weights and measures. He shall condemn and seize and may destroy incorrect weights, measures, or weighing or measuring instruments which, in his best judgment, are not susceptible of satisfactory repair; but such as are incorrect, and yet may be repaired, he shall mark or tag as "Condemned for repairs" in a manner prescribed by the State superintendent of weights and measures. The owner or users of any weights, measures, or weighing or measuring instruments of which such disposition is made shall have the same repaired or corrected within 10 days, and they may neither use nor dispose of the same in any way, but shall hold the same at the disposal of the sealer. Any apparatus which has been "condemned for repairs" and has not been repaired as required above shall be confiscated by the sealer.

The county sealer shall keep a complete record of all of his official acts and shall make an annual report to the board of county commissioners and an annual report duly sworn to on the first day of ——— to the State superintendent of weights and measures on blanks to be furnished by the superintendent. The county sealer of weights and measures shall forthwith on his appointment

give a bond in the penal sum of \$1,000, with sureties, to be approved by the appointing power, for the faithful performance of the duties of his office.

Provided, however, That nothing in the above shall be construed to prevent two or more counties from combining the whole or any part of their districts, as may be agreed upon by the boards of county commissioners, with one set of standards and one sealer, upon the written consent of the State superintendent of weights and measures. A county sealer appointed in pursuance of an agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

On motion of Mr. Boyer, the section was adopted.

Section 6 was then read by Mr. Maroney, as follows:

SECTION 6. There shall be a city sealer of weights and measures in cities of not less than 25,000 population, according to the latest official State or United States census, to be appointed by the mayor from a list to be furnished by the civil service board and under the rules of such board, where such board exists; otherwise he shall be appointed by the mayor by and with the advice and consent of the county council. He shall perform in said city the duties and have like powers as the county sealer in the county. In those cities in which no sealer is required by the above, the county sealer of the county shall perform in said cities the duties and have like powers as in the counties.

Provided, however, That nothing in the above shall be construed to prevent any county and the city situated therein from combining the whole or any part of their district as may be agreed upon with one sealer, subject to the written approval of the State superintendent of weights and measures. A sealer appointed in pursuance of any agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

On motion of Mr. Austin the section as read was adopted.

Section 7 was then read by Mr. Maroney, as follows:

SECTION 7. Any person who by himself or by his servant or agent or as the servant or agent of another shall offer or expose for sale, sell, or use or retain in his possession a false weight or measure or weighing or measuring device, or any weight or measure or weighing or measuring device which has not been sealed by the sealer of weights and measures within one year in the buying or selling of any commodity or thing, or for hire, or award; or who shall dispose of any condemned weight, measure, or weighing or measuring device contrary to law or remove any tag placed thereon by a sealer of weights and measures; or any person who by himself or by his servant or agent or as the servant or agent of another shall sell or offer or expose for sale less than the quantity he represents, or sell or offer or expose for sale any such commodity in a manner contrary to law (or any person who by himself or by his servant or agent or as the servant or agent of another shall sell or offer for sale or have in his possession for the purpose of selling any device or instrument to be used to or calculated to falsify any weight or measure), shall be guilty of a misdemeanor, and shall be punished by a fine of not less than \$20 or more than \$200, or by imprisonment for not more than three months, or by both such fine and imprisonment upon a first conviction; but upon a second or subsequent conviction he shall be punished by a fine of not less than \$50 or more than \$500, or by imprisonment in the county jail for not more than one year, or by both such fine and imprisonment.

Mr. AUSTIN. I move the adoption of the section as read.

The motion was seconded.

The CHAIRMAN. Are there any remarks?

Mr. MARONEY. Mr. Chairman, of course this bill is intended as a State law. There is a good deal of it that can be incorporated as a city or local ordinance for the town or borough; but in incorporating that law, as I have been given to understand, the common council can at any time prescribe a fine in the local jurisdiction, but not imprisonment in jail; that must be done through a State law. I mention that because I have come in contact with that myself within a short while, and I think it is an advantage to know that it is illegal for any common council to include in an ordinance any provision whereby a man can be imprisoned.

The question was taken and the section adopted.

Section 8 was then read by **Mr. Maroney**, as follows:

SECTION 8. The superintendent of weights and measures, his deputy and inspectors, and the county and city sealers of weights and measures are hereby made special policemen and are authorized and empowered to arrest, without formal warrant, any violator of the statutes in relation to weights and measures, and to seize for use as evidence and without formal warrant any false weight, measure, or weighing or measuring device or package or amounts of commodities found to be used, retained, or offered, or exposed for sale, or sold in violation of law.

Mr. McINTYRE. I move the adoption of the section as read.

The motion was seconded.

Mr. CONNORS. I would suggest adding after the word "false" the words "or unsealed," so that it will read, "false or unsealed weight, measure, or weighing or measuring device." In the previous section it is made a violation of law for any person to have an unsealed weighing or measuring device in his possession, and I think the word "unsealed" should be put in section 8 so as to give the inspector a chance to seize the unsealed weights or measures.

The CHAIRMAN. Has anyone else any opinion to offer on that? It seems to me that that is an oversight. Do you make that as a motion?

The CHAIRMAN. Do you make that as a motion?

Mr. CONNORS. I make it as a motion.

The SECRETARY. I second Mr. Connors's motion.

The question was taken and the section was adopted.

Section 9 was then read by **Mr. Maroney**, as follows:

SECTION 9. Any person who shall hinder or obstruct in any way the superintendent of weights and measures, his deputy or inspectors, or any county or city sealer in the performance of his official duties shall be guilty of a misdemeanor and shall be punished upon conviction thereof in any court of competent jurisdiction by a fine of not less than \$2 or more than \$200, or by imprisonment in the county jail for not more than 90 days, or by both such fine and imprisonment.

Mr. AUSTIN. I move its adoption.

The motion was seconded.

The CHAIRMAN. Are there any remarks?

Mr. CONNORS. Mr. Chairman, I would move to add after "any person who shall hinder or obstruct" the words "or impersonate in any manner, by use of seal or otherwise."

The CHAIRMAN. You have found in your experience that that does sometimes occur?

Mr. CONNORS. Yes; either impersonation or the use of the seal.

The SECRETARY. We have even been impersonated ourselves. We have received quite a number of notices that United States inspectors had appeared in Arizona, or some other part of the country, when we had had no one there at all. I suppose they read these newspaper accounts.

Mr. THOMAS. Mr. Chairman, it seems to me that the offenses are of a very different order. I should prefer very much to see the section stand as it is, and see an additional section placed there to cover the case of impersonation, with a much more severe penalty.

The CHAIRMAN. In other words, you think it is not in the same class?

Mr. THOMAS. Not the same class of offense at all.

Mr. CONNORS. That is a very low fine for impersonation. I think that it should be increased. Therefore, I favor Mr. Thomas's idea.

The CHAIRMAN. Are there any other remarks?

Mr. CONNORS. I put that as a motion, that a section be added covering the impersonation of the sealer by seal or otherwise.

The CHAIRMAN. Will you suggest a wording for that?

The SECRETARY. Mr. Chairman, I would like to state that I have just found in my office a letter from Indiana to the effect that the bill that has just been introduced out there had passed the house. It conforms with our model bill in every particular. They are almost identical except that this bill provides that the State food and drug commissioner shall be the State commissioner of weights and measures. However, it prescribes his duties, and he has to perform them; and it seems to me that he is just as apt to neglect his duties as food commissioner as to neglect his duties as State sealer of weights and measures.

Mr. THOMAS. As to this bill: Is it intended to cover such things as the testing of gas meters, water meters, and electric meters?

The SECRETARY. It seems to me that it is open to that construction. It lends itself to the broadening of the scope of these officials whenever necessary. Do you see any objection?

Mr. MARONEY. Mr. Chairman, my town, New Haven, last Monday accepted these model regulations, with revisions to make them fit the city instead of the State. They have just gone through the common

council and were signed by the mayor last Monday. Last evening, to make it more binding, there was a public hearing before the board of aldermen. In explanation, I would say that the city water, gas, and electric corporations are private corporations; and there was a bill introduced giving the department of weights and measures supervision over all meters and providing that these meters must be tested and sealed by the department of weights and measures before being put into use. In other words, when either of the three corporations had any meters of any description to put up in public places where their commodities were to be used, before doing so they should submit them to the department of weights and measures, and that department should test them and seal them before they could be put into use.

The CHAIRMAN. We have this new section.

Section 10 was then read by Mr. Maroney, as follows:

SECTION 10. Any person who shall impersonate in any way the superintendent of weights and measures by use of his seal or counterfeit of his seal or otherwise shall be guilty of a misdemeanor and shall be punished by a fine of not less than \$100 and not more than \$500 or by imprisonment for not more than one year, or both such fine and imprisonment.

Mr. HOLBROOK. Mr. Chairman, instead of the word "superintendent," the phraseology should be made to conform to the rest of the bill and made to include local sealers, inspectors, and deputy superintendents.

Mr. THOMAS. I move the adoption of the section with the suggested amendment.

The motion was seconded and the section adopted.

The CHAIRMAN. Now, the bill as a whole has been adopted section by section.

Mr. HENRY. Has section 9 been adopted?

The CHAIRMAN. Yes, sir; do you wish to recall it?

Mr. HENRY. After it was all gone over, I just wanted to make a motion to reconsider all but section 1 of this bill, on account of the name given the State official. It seems to me that a great many of the States will not agree to call the State official the "State superintendent."

The CHAIRMAN. They do not have to do so.

Mr. HENRY. No; but we go on record here as designating the name "State superintendent" as the proper name, and it seems to me that we should not. I know of only one State where the State officer is called superintendent and several States where he is called commissioner. I do not mean to say that they should necessarily be called commissioners, but leave it blank or else put in "commissioner" or "State sealer."

Mr. HOLBROOK. Mr. Chairman, I would suggest that the word "superintendent" be bracketed in every case. I will say, however, that in my own experience throughout the country I find that the senators who are introducing any legislation on the subject of weights and measures prefer the term "superintendent" to "commissioner," especially in the West, and in some of the eastern States also; and that was the reason why "superintendent" was used. A commission is often intended as a temporary investigating committee. Commissions will be appointed to investigate various State departments, and, inasmuch as this is a permanent office, we preferred to use the term "superintendent." I think I may say with safety that the majority of the States would prefer the term "superintendent." But that might very well be bracketed and left to the individual States, since, if the powers and duties of the official are the same, his title—provided persons will recognize him by his title—is of very little importance.

Mr. HENRY. Mr. Chairman, I do not want to take up very much time. I just wanted to say that I do not know about the West, but it seems to be the custom in the East—among the New England States anyhow—to give the head of a department similar to this the name "commissioner," and that is my reason for urging that title, so that the heads of departments of the same order may all be called by the same name.

The CHAIRMAN. If this word is bracketed it would answer your purpose, would it not?

Mr. HENRY. Yes; that would be satisfactory.

The CHAIRMAN. It is understood that that will be changed, if necessary. Of course, we have not the power to prevent the States from changing it, even if we wished to do so.

Mr. HOLBROOK. Mr. Chairman, at the time the New York State bill was being considered I was in the New York State department, and I know there was an objection to the word "commissioner" in New York State. The word "superintendent" was substituted in the original bill.

The SECRETARY. Mr. Chairman, I understood that there was a reason for that in New York State, namely, that "superintendent" and "commissioner" do mean different things. But I do not believe that applies to other parts of the country.

Mr. HOLBROOK. It applies to the West almost entirely.

The SECRETARY. Mr. Chairman, I think the word "commissioner" in the West usually means a member of a commission, a body composed of more than one man. However, the term is a variable one. For instance, we have the commissioner of the general land office. He alone is the head of the land office. Still, I am very much in

favor of putting in the word "commissioner" and the word "superintendent" in brackets.

The CHAIRMAN. The practice of the Government is varied, but it is the general custom, I believe, to use the term "commissioner" to indicate a temporary office; that is, a member of a commission, although we have several instances where men holding permanent offices are called commissioners.

Mr. WALL. Mr. Chairman, in the original form of our State government, the heads of the several departments were called secretaries; for instance, the secretary of the Commonwealth, the secretary of agriculture, and the secretary of internal affairs. Then we have commissioners. There is the commissioner of highways, the commissioner of railroads, the public-school commissioner, etc. Then we have superintendents.

The CHAIRMAN. What is your idea in regard to this particular point? Should this be left "superintendent" or bracketed, or what suggestion have you in mind?

Mr. WALL. I will say bracketed.

Mr. THOMAS. In matters such as these regarding local designation of officers, local methods of procedure, and all that, it seems to me that it would be very wise if we would put an explanatory note or paragraph either at the head of the suggested code or at the foot of it, explaining that the purpose of the conference is to secure proper laws regarding the use of standards and to secure thorough inspection regarding their use in commerce; that such matters as the name of the chief officer and that of any of his subordinates, terms of office, salaries, and all those things, are suggestive only, and that the idea of the conference is that they should be changed to conform to the existing lawful practice in the various States of the Union.

The CHAIRMAN. That is a very good suggestion.

Mr. GOODWIN. Mr. Chairman, I can not see where the names of the officials will affect conditions any. We have different names of officials in different sections of the country. In our town we have a town council; in the States adjoining us they have boards of selectmen. I do not think that the name of the official in this matter should be considered.

The CHAIRMAN. Then you agree with Dr. Thomas?

Mr. GOODWIN. Exactly.

Mr. THOMAS. Mr. Chairman, it has been suggested that I make a motion to that effect. I therefore move that an explanatory note of the intent which I have roughly outlined be added to this and that the wording of the note be referred, with power, to the president and the secretary of this conference.

Mr. GOODWIN. I second the motion.

The question was taken and the motion was carried.

Mr. MARONEY. Mr. Chairman, I have some more sections to read.

The SECRETARY. These are sections which were added afterwards and have not been numbered.

Mr. Maroney read as follows:

Bottles used for the sale of milk and cream shall be of the capacity of half gallon, 3 pints, 1 quart, 1 pint, half pint, and 1 gill, filled full to the bottom of the lip. The following variations on individual bottles or jars may be allowed, but the average content of not less than 25 bottles selected at random from at least four times the number tested must not be in error by more than one-quarter of the tolerances: Six drams above and 6 drams below on the half gallon; 5 drams above and 5 drams below on the 3 pint; 4 drams above and 4 drams below on the quart; 3 drams above and 3 drams below on the pint; 2 drams above and 2 drams below on the half pint; and 2 drams above and 2 drams below on the gill. Bottles or jars used for the sale of milk shall have clearly blown or otherwise permanently marked in the side of the bottle, the capacity of the bottle, and the word "Sealed"; and in the side or bottom of the bottle the name, initials, or trade-mark of the manufacturer and a designating number, which designating number shall be different for each manufacturer and may be used in identifying the bottles. The designating number shall be furnished by the State superintendent of weights and measures upon application by the manufacturer, and upon the filing by the manufacturer of a bond in the sum of \$1,000, with sureties to be approved by the attorney general or secretary of state, conditioned upon their conformance with the requirements of this section. A record of the bonds furnished, the designating numbers, and to whom furnished shall be kept in the office of the superintendent of weights and measures.

Any manufacturer who sells milk and cream bottles to be used in this State that do not comply as to size and markings with the provisions of this section shall suffer a penalty of \$500, to be recovered by the attorney general in an action against the offender's bondsmen to be brought in the name of the people of the State. Any dealer who uses, for the purpose of selling milk or cream, jars or bottles purchased after this law takes effect that do not comply with the requirements of this section as to markings and capacity shall be deemed guilty of giving false or insufficient measure.

Sealers of weights and measures are not required to seal bottles or jars for milk or cream marked as in this section provided, but they have the power and shall from time to time make tests on individual bottles used by the various firms in the territory over which they have jurisdiction in order to ascertain whether the above provisions are being complied with, and they shall report violations found immediately to the State superintendent of weights and measures.

Mr. MARONEY. I move the adoption of this section.

The motion was seconded.

The CHAIRMAN. It is moved and seconded that this be added to the bill already acted upon as an additional section. Are there any remarks?

Mr. CONNORS. Mr. Chairman, while this is under discussion here I might state that there is considerable doubt in the minds of weights and measures officials throughout the country as to the constitution-

ality of any law that prescribes a different standard from the one furnished by the United States Government to the States. It seems to me that is a debatable point, and I would like to see it brought out.

The CHAIRMAN. It seems to me this is a decided step in the direction of relieving the city official or inspector of a large amount of unnecessary work. I think this same scheme will sooner or later be carried out in other directions.

Mr. GOODWIN. Mr. Chairman, according to the laws of Massachusetts, the manufacturers of milk bottles can stamp their own bottles under a guaranty, and, of course, that is supposed to be an accurate measure; but according to the best testimony that I have been able to obtain it is not a fact. Those bottles are short in a great majority of cases. Now, what are we going to do if we give the right to a manufacturer of bottles to put a seal on the bottles and then allow him to come into a locality and sell that bottle when it is undersize?

The CHAIRMAN. It is not a seal; it is an identification mark.

Mr. GOODWIN. Well, it is supposed to be a seal; it covers the ground of sealing, because a local sealer has no right to interfere with that bottle. He may test it, but further than that he can not go. He can not destroy it; he can not confiscate it, or anything of that kind.

Mr. HASKELL. Mr. Chairman, as I understand it, that manufacturer is under a bond, and if he sends out a bottle that is not full capacity, why don't they prosecute him?

Mr. GOODWIN. That is the idea exactly. Why don't they? They don't. That is the point I want to bring out emphatically. There have been no convictions under the law, so far as I know, and I heard the statement made emphatically by the local sealers that such was the case, but they could not do anything and did not do anything.

Mr. CONNORS. On the subject of tolerance I would like to give a little information. In the State of Massachusetts Mr. Palmer has recommended a bill which does away with tolerance altogether. If this conference goes on record as favoring a bill requiring tolerance on milk jars, I do not know what effect it will have in Massachusetts, and I would like to see that question debated before the conference takes final action on this bill.

The CHAIRMAN. It seems to me, Mr. Connors, that we must recognize tolerance in some way or other, and that when we do it means a certain thing. Tolerance as defined here is not objectionable—that is, it is not a mere statement of a tolerance of so much, but it says how it shall be determined, which makes it altogether a different question.

Mr. CONNORS. My point was to inform the conference of the state of affairs in Massachusetts. I was wondering what effect it would have on that legislation.

MR. MARONEY. Mr. Chairman, it is necessary to do something on this bottle question. It is a serious problem for the sealer of any city to seal these bottles. In a city of 150,000 inhabitants there would be 400,000 bottles (that is a conservative estimate), and you would need all the Standing Army of the United States to seal all the bottles in a State. Moreover, the life of a bottle is not more than three months on an average. But by adopting such a method as this, allowing the manufacturer, under bond, to take care of the sealing of bottles, any reliable bottle manufacturer will give a guarantee, under a bond of \$1,000 or \$5,000, that there will not be over 1 dram of tolerance in a bottle, and you will eliminate all this trouble for the sealers and at the same time thoroughly cover the ground. I can not see any objection to it. If the State of Massachusetts does not want tolerance, then let it remove the tolerance; but the bill itself, covering the bottle proposition, be it liquor or milk or anything else, in putting the glass manufacturer under bond, is a good thing, and it should be taken up by this conference and adopted. If there is anything objectionable on account of local conditions, remove it; but the bill, as a foundation, is worth considering and passing as a whole. We can take it home and dissect it afterwards.

THE SECRETARY. Mr. Chairman, the idea that Mr. Palmer has is in accordance with the Maine law. The law in Maine and the law that Mr. Palmer has before the legislature provide that the quantity shall not be less than a quart, less than a pint, etc., and require the manufacturer to keep that standard. But the practice of all foreign countries is to allow a tolerance. Every country in the world, so far as I know, permits a reasonable tolerance in every kind of apparatus, both above and below; it tries to keep the thing correct. If it is required to have the quantity at least correct the tendency is to create a standard that is a little large. There is no question about that. Other countries have attempted to keep the standard correct and permit very small variations above and below.

MR. MARONEY. I move the adoption of this recommendation, Mr. Chairman.

MR. HASKELL. Just a moment. When the tolerance on milk bottles was adopted in the District of Columbia and in other sections of the country, bottles were manufactured by hand. Milk bottles to-day are manufactured by machinery, and there is no reason why an absolute quart or 2-quart bottle can not be manufactured, except that perhaps it might vary a dram. But to allow a large tolerance on milk bottles I do not think is at all necessary, because the process of manufacturing milk bottles has changed within a very few years.

THE CHAIRMAN. I understand that this suggested amendment takes that into account, and that this is the tolerance that can be safely lived up to with these machine-made bottles.

Mr. CONNORS. Mr. Chairman, I would suggest that the tolerance be bracketed.

The CHAIRMAN. That is a very good suggestion.

Mr. GOODWIN. Mr. Chairman, I believe that tolerance is the dangerous thing about this bill. My predecessor was a wise man when he opposed any legislation allowing tolerance in the State of Rhode Island. I am satisfied that he knew what he was doing and used good judgment and wisdom. I find, and I know for a fact, that these people who are allowed a chance to defraud the public by using a tolerance scale make their apparatus on the minimum side. They give the people the short end of it every time.

The SECRETARY. Mr. Chairman, I think I can save Mr. Goodwin a good deal of unnecessary trouble if I point out that this particular provision is different from any he has ever seen. It says that the average must be practically correct, the average of a certain number of bottles.

Mr. GOODWIN. Well, I should have the average of the whole of them, at least the quantity that the parties buy. If one buys a quart of any commodity, he ought to get a quart; and if the merchant sees fit to give him any surplus, which he does not very often do, that is his lookout. I believe that it should be definitely stated what the bottle shall hold, and then you have the thing settled for good and all.

Mr. HASKELL. Mr. Chairman, it is a fact that you can manufacture an absolutely perfect bottle as to measure with the machinery that is now used, but 4 drams (the tolerance prescribed for the quart) is about half of a tablespoonful.

The CHAIRMAN. I would like to get that in percentage. Do you consider the tolerance too great?

Mr. HASKELL. No, no. That is the same as it is in the District now.

The CHAIRMAN. You are in favor of tolerance, then?

Mr. HASKELL. Yes.

Mr. HOLBROOK. Mr. Chairman, I would say for the information of the delegates that I have figured the percentage on the quart bottle, and it is five-tenths of 1 per cent.

The CHAIRMAN. That is what I wanted to get.

Mr. HENRY. Mr. Chairman, I want to propose an amendment. In the last two lines, next to the last paragraph, it reads: "shall be deemed guilty of giving false or insufficient measure." I think that word, instead of "giving," should be "using," and I would propose that amendment.

The CHAIRMAN. That is simply an improvement in the phraseology?

Mr. HENRY. Yes.

Mr. HOLBROOK. I think that is a good suggestion.

The CHAIRMAN. Is there any objection to this amendment? If not, we will change that and ask for the vote upon the section as amended.

The question was taken and the section was adopted.

The CHAIRMAN. I want to call your attention to the effect of that. If this is enacted into law, as I hope it will be, the effect will be more far-reaching than you perhaps think. If it is possible to do that in the case of milk bottles, it is possible to do it in the case of weights and all other manufactured commodities.

Mr. Maroney thereupon read as follows:

It shall be unlawful to sell or offer to sell in the State any coal, charcoal, or coke in any other manner than by weight. No person, firm, or corporation shall deliver any coal, charcoal, or coke without each such delivery being accompanied by delivery ticket and a duplicate thereof, on each of which shall be in ink or other indelible substance, distinctly expressed in pounds, the gross weight of the load, the tare of the delivery vehicle, and the quantity or quantities of coal, charcoal, or coke contained in the cart, wagon, or other vehicle used in such deliveries, with the name of the purchaser thereof and the name of the dealer from whom purchased. One of these tickets shall be surrendered to the sealer of weights and measures, upon his demand, for his inspection, and this ticket or a weight slip, issued by the sealer when the sealer desires to retain the original, shall be delivered to the said purchaser of said coal, or his agent or representative, at the time of the delivery of the fuel, and the other ticket shall be retained by the seller of the fuel. When the buyer carries away the purchase, a delivery ticket, showing the actual number of pounds delivered over to the purchaser, must be given to the purchaser at the time the sale is made.

Mr. MARONEY. Mr. Chairman, I recommend the adoption of this section, with the proviso that it be distinctly expressed in pounds avoirdupois.

Mr. HOLBROOK. Mr. Chairman, I think if it was distinctly specified in kilograms it would still be legal.

The CHAIRMAN. I think your idea is to avoid the long and short ton, is it not?

The SECRETARY. According to the United States law it is legal to use metric weights and measures, and that would be in conflict with it.

The CHAIRMAN. We might get into trouble.

The SECRETARY. So we tried to avoid that.

The CHAIRMAN. The important thing there is the selling of these commodities by weight.

Mr. MARONEY. Yes.

Mr. CONNORS. Mr. Chairman, I move that the word "coke" be stricken out. There has been a great deal of trouble in different parts of the country in regard to the sale of coke, and it is the custom to sell it by measure. There is a good deal of fraud in coke on ac-

count of wetting it down before selling it. This was done in Massachusetts, and coke is sold there now by measure—by Winchester bushel.

Mr. MARONEY. Mr. Chairman, the same thing holds good in coal. Why not stretch it to coal! I also found a dealer in my town watering dried fruit with a sprinkling can and selling it by the pound.

Mr. HASKELL. Mr. Chairman, you can take a ton of coke and put two barrels of water on it and you would not notice it. If you want to demonstrate it take a cart of it and try it.

The SECRETARY. I second Mr. Connor's motion that the word "coke" be stricken out.

The question was taken and the amendment adopted.

Mr. HENRY. Mr. Chairman, I would like to make just one suggestion, and that is whether or not this section as it stands is constitutional. Should not there be a provision after the first sentence, "except by express contract providing otherwise"?

The CHAIRMAN. I am not enough of a lawyer to answer your question.

Mr. MARONEY. Mr. Chairman, there is nothing in any law that will prevent parties from selling anything in bulk. Coal, wood, or anything can be sold in bulk by special agreement.

Mr. HENRY. That is the point exactly. Here is the law, which says that it shall be unlawful to sell in any other way than as prescribed here. In other words, it brands as unlawful an express contract between two persons, which express contract can not be made unlawful.

Mr. CONNORS. Mr. Chairman, I think Mr. Henry's point is that the whole statute would be thrown out as unconstitutional if that clause is not in; and if that is so, that is a good point.

Mr. MARONEY. I explained that situation yesterday, Mr. Chairman. It is covered thoroughly by the words "unless by special agreement."

Mr. HOLBROOK. Mr. Chairman, I would suggest that I think it is perfectly within the police power of the State to specify what kind of agreement it shall be. I would make it a written agreement, so that it would not be one man's word against another's.

Mr. HENRY. Then I move to amend that section by adding to the first sentence the words "except by written agreement."

The motion was seconded.

The question was taken and the section adopted.

Mr. Maroney thereupon read as follows:

All bread baked and kept for the purpose of sale, offered or exposed for sale, or sold in the State, shall be made of good and wholesome flour or meal, or both, and shall be sold by weight. To each loaf of bread shall be attached a label or stamp, plainly showing its weight and the firm name of the manufacturer thereof, the size of stamp and type used to be specified by the State superintendent of weights and measures. It shall be unlawful for any person

to make for sale, sell, offer to sell, or procure to be sold, any bread other than such as shall be in accordance with the provisions of this section.

Mr. HOLBROOK. Mr. Chairman, I have one suggestion to make. I move that the words "shall be made of good and wholesome flour or meal, or both," be stricken out, on the ground that it is not strictly weights and measures.

The CHAIRMAN. It seemed to me that was getting a little out of our province.

The SECRETARY. I move the adoption of the section as amended.

The CHAIRMAN. If there is no objection, we will consider that amendment adopted. I think it is a very good suggestion.

The question now is as to the whole law. Motions will be in order, I think, to adopt this as a whole.

Mr. MARONEY. I move, sir, that the model bill as read to-day be adopted as a whole, with the recommendations attached.

The SECRETARY. I second the motion.

The question was taken and the bill was adopted.

At this point a recess was taken for luncheon.

FOURTH SESSION (AFTERNOON OF SATURDAY, FEBRUARY 18, 1911).

The conference reassembled at 2.20 p. m.

The SECRETARY. In regard to the report made this morning on the bill fixing the sizes of certain containers and so on, I have had copies of the bill made. I think practically everybody has a copy of it.

The object of this bill is to fix certain containers as standard and to fix the sizes of certain containers; but it permits the use of other containers provided the net capacity is marked on the outside. That seems, in the opinion of the committee, to be absolutely necessary. We realize that that legalizes all sorts of odd-shaped and odd-sized containers, but it fixes what has never been fixed before. If an attempt were made to enforce the use of a certain standard barrel, it would not succeed, because it has not been fixed by law. This bill goes farther than anything else at the present time, and does fix what the standard is; but it also permits these other containers, and it is claimed that the use of nothing but the standard will be insisted upon, and that eventually it will result in the standard being used and no other size container. I thought it was necessary to make that explanation in order that you might understand these provisions as they come up. [Reading:]

A BILL fixing the sizes of certain containers and requiring the net quantity of the contents to be marked on the outside of certain other containers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it shall be unlawful for any person within any Territory or the District of Columbia to manufacture, sell, offer or expose for sale containers for vegetables, produce, or fruit that are not of the capacity of one barrel, half-barrel, one-third barrel, or multiples of the barrel or submultiples of the bushel divisible by two: Provided, however, That fruits, vegetables and produce may be sold in other sized containers if the net capacity in terms of measure is plainly and conspicuously marked, branded, or otherwise indicated in the English language on the outside or top thereof, or is marked in accordance with the provisions of section 2: Provided further, That a barrel within the meaning of this act shall represent a quantity of 7,056 cubic inches, or a quantity equal to a barrel having the following dimensions: Head diameter, 17½ inches; length of stave, 26½ inches; circumference of bilge not less than 64 inches outside measurement; distance between heads not less than 26 inches; and to be known as a standard barrel: And provided further, That reasonable tolerances shall be established.

Mr. CONNORS. Mr. Chairman, I move that the first section be adopted as read.

The motion was seconded.

Mr. WESCOTT. Mr. Chairman, I do not mean to trespass on the time of the convention. I appreciate heartily the courtesy extended me yesterday. However, there is one matter of very great practical importance, bearing on the wording of the proposed statute here, to which I would like very much to call your attention, if it be the will of the convention.

The CHAIRMAN. We will be very glad to hear what you have to say, especially if it refers to the other side of this question.

The SECRETARY. I might state that Mr. Wescott represents the shippers, and I think his opinion is very important in this matter. We are trying here to describe what the sizes of containers shall be that he is going to use, and I know he has given the matter a great deal of thought and I am sure we will be very glad indeed to hear from him.

Mr. WESCOTT. Mr. Chairman and gentlemen, the organization on whose behalf I am here is filling about 2,000,000 of these barrels annually for shipment into about 40 States of the Union. In going over the list of delegates yesterday I was struck by the fact that there was probably only one gentleman present to whose table we had not at some time contributed. The specific point to which I wanted to ask your attention, especially in view of the fact, as I take it, that this proposed statute will probably be taken as a model for State legislation, is the fact that your requirement is alternative; that the law can be met either by giving your barrel a capacity of 7,056 cubic inches or by making your barrel of the dimensions specified. Now, a barrel is not a regular geometrical figure, and the point I want to make is that a barrel of the dimensions specified might or might not hold 7,056 cubic inches. It is the unanimous verdict of the manufacturers of barrels that the shape of a barrel varies not only with the manner of manufacture but with the nature of the material. A more elastic wood will give you a rounder barrel, one of a more shapely figure. Of course, as you depart from the approach to a spherical shape in your barrel, as you lessen the amount of curvature of the stave, and as the shape of your barrel approaches that of two truncated cones, base to base, giving more nearly a straight line from the point of maximum bulge to the two ends of the barrel, you lessen the holding capacity of the barrel. It is obvious on a little reflection that you can not fix an absolute standard by prescribing the dimensions of your barrel; and I think, expressed in this alternative manner, your statute would work some injustice to sections that do not find it practicable to follow the specifications given here, aside from that element of confusion, the indeterminateness of the thing. In my own par-

ticular section we make a barrel of pine timber, and we can not make a barrel with a $28\frac{1}{2}$ -inch stave and a $17\frac{1}{2}$ -inch head having a bilge that will give an outside diameter of 64 inches. The material is not elastic enough, and it splits before you bend it that much; so that our section must necessarily depart from these dimensions. In competition with other sections, where the material used is oak, perhaps, and where these dimensions can be followed, that would put the South, the pine-timber section of the United States, at a disadvantage. I would like to recall in this connection the part of Secretary Nagel's address this morning, in which he referred to the extreme desirability of establishing uniformity of measure among competitors. You see very readily the bearing of that principle on this particular proposition. The southern producer, compelled by local conditions to depart from the exact dimensions specified here, would be put at a disadvantage by comparison with sections that could follow these dimensions, and at the same time, by varying slightly the shape of their barrel, straightening the stave from the bulge to the two ends, make a barrel that would get the sanction (as a technical legal proposition) of any court, as in compliance with the second alternative here (that specifying the exact dimensions), but that would not hold 7,056 cubic inches.

I thank you, gentlemen.

Mr. GOODWIN. Mr. Chairman, I would like to ask the gentleman a question. What would you wish to do—cut out the cubical contents?

Mr. WESCOTT. No, sir; by no means. Retain that provision and cut out the dimensions—make it plain and unambiguous.

Mr. GOODWIN. So, that no matter what the construction was, it would hold that quantity?

Mr. WESCOTT. We believe the shape to be a matter to be determined by local convenience.

Mr. GOODWIN. I think that is a good suggestion.

Mr. CONNORS. Mr. Chairman, I would call attention to the fact that in the specified dimensions the bilge is given as not less than 64 inches outside measurement, while the thickness of the staves is not specified. That would allow manufacturers to use staves of greater thickness, giving a smaller number of cubic inches inside measurement. I think that point ought to be stated, if we are going to state the outside dimensions.

The SECRETARY. The bill is all right at the present time, because the capacity is fixed. But I think myself there is a good deal in what Mr. Wescott says, that one or the other of these ought to be approximate. You can not fix them both, because the barrel is not a definite geometrical figure. We know that there are three different forms allowed for by the internal revenue laws, and taking the formula that they use in computing the size of the barrel and

estimating whether it comes in one class or another, we can make the capacity of a barrel of these dimensions vary from 7,300 cubic inches down to 6,900.

Mr. CONNORS. Mr. Chairman, the bill here gives two options. It says that the barrel shall represent a quantity of 7,056 cubic inches or a quantity equal to a barrel having certain specified dimensions. It seems to me a man would have the option either of measurement in cubic inches or by the dimensions of the barrel, and I think the bilge measurement specified should be inside measurement.

The CHAIRMAN. It seems to me it was intended that the barrel should contain 7,056 cubic inches and that the other dimensions were intended as limits. That would be a practical solution and prevent extreme variations from the size to specify the number of cubic inches and specify the limits in these other dimensions.

Mr. GOODWIN. Mr. Chairman, I can not see that the dimensions of the barrel would have any weight at all in this bill. As long as we have the cubical contents it gives anybody the right to make a barrel of any construction that holds that quantity.

The SECRETARY. Mr. Chairman, it is very important, I think, that these barrels should be of approximately the same size. Is not that true, Mr. Wescott? You would not want barrels that differed from one another in height by 4 or 5 inches?

Mr. WESCOTT. No; I should think not, sir. They should be exactly the same size.

The CHAIRMAN. I think we can get around that very nicely. I would like to ask Mr. Wescott what is the most important dimension. What dimension would you have limited? The height? We could limit one of these dimensions, or two, but not three.

Mr. WESCOTT. We, as producers of potatoes, and also the manufacturers of barrels, have had that matter up for discussion for a long time in our section. This question of building a barrel of certain specified dimensions, to hold a certain definite capacity, has been found with us impossible of solution. We have never been able to hit upon any set of dimensions that the manufacturer could not in some way beat when it came to the question of the holding capacity of the barrel. The difference in amount of curvature of the stave comes in there.

The CHAIRMAN. That can be remedied by leaving one dimension flexible. You see, there are three dimensions concerned—the length of the stave, the head diameter, and the bilge. One of those left open would allow for the very thing of which you are speaking. If it is the length of stave that is important, why not specify that? Or you might specify two dimensions, but you can not specify three and at the same time have the number of cubic inches.

The SECRETARY. The whole thing can be corrected if the diameter of the head is all right. That is, in order to get this capacity you would have to have a bilge diameter of 21 inches, and if that is not too great, it seems to me we ought to specify that bilge diameter. But I understand Mr. Wescott to say that some of the people can not meet that requirement; if you make the head diameter as low as 17½ inches it requires more of a curve than can be made.

Mr. WESCOTT. Yes; you can not give your stave any very great curvature.

The SECRETARY. That is not very much, though.

Mr. WESCOTT. The point I wanted to make is that there is another factor that enters into the determination of the capacity of your barrel besides the diameter of the head, length of the stave, diameter of the bilge, and distance between the heads which is not susceptible of measurement as a practical working proposition; and that is the nature of the curve represented by a longitudinal cross section of your stave. If you take a barrel approaching the form of two truncated cones set base to base, the stave being rather a broken than a gradually curved line, it may exactly meet your requirements here as to dimensions and yet it will hold very much less than a barrel made of elastic material in the same dimensions but forming a gradual curve. There is a difference between the holding capacity of a barrel the stave of which is curved gradually and freely from top to bottom and one in which the curvature is in the middle.

The CHAIRMAN. I think we all understand that, Mr. Wescott. The question is this: Would it not answer to specify, say, the height and the number of cubic inches? If you have a less elastic material all that would be necessary would be to make the diameter a little larger. You fix the whole thing when you fix the height and the number of cubic inches.

Mr. CONNORS. Mr. Chairman, assuming that we specify the number of cubic inches in the barrel, do not the dimensions of the barrel then become a matter of the personal convenience of the shipper, with which we could not rightly interfere?

The CHAIRMAN. Except that they wish to have uniform sizes in shipping, etc.

Mr. CONNORS. That would be, then, a matter of personal convenience?

The CHAIRMAN. No; there are cases, as in dry measures, in which proportions must be specified. You might make a dry measure very narrow and very slim and it would not be a good measure. It ought not to be allowed.

Mr. CONNORS. As I understood the gentleman from Virginia to say yesterday, it is impossible to stack potatoes or any commodity of that nature in a barrel, because they would, in shipping, come right down.

Then it seems to me it is a matter of convenience that we would not be really interested in.

The CHAIRMAN. Has anyone a suggestion to make as to a change?

The SECRETARY. I move that we strike out the bilge measurement entirely. Make 7,056 cubic inches the capacity, and then specify the height. Do you not think that would fix the matter all right?

Mr. WESCOTT. I think so, provided you make it absolutely certain in the statute that the barrel must hold a minimum of 7,056 cubic inches. But if the language of the statute be left in the present alternative form, giving the manufacturer an option between building his barrel of dimensions to suit himself and making it hold 7,056 cubic inches on the one hand, and complying with these specified dimensions on the other, then you open the door for the manufacturer to build a barrel which will comply technically and legally with the second alternative here, but which will still not hold 7,056 cubic inches; and thereby you put at a disadvantage the manufacturer or the producer who, because of peculiar local conditions (in our individual case the fact that the steamers that carry a considerable proportion of our goods can not take a 28½-inch stave three times between decks), has no such opportunity to comply with a technical set of dimensions. If it be in order, I would suggest that this objection might be met (if it be the wish of the convention to include these dimensions in some shape) by adding a proviso, somewhat in this form, after the last of those specified dimensions: "Distance between heads not less than 26 inches: *Provided, however,* That no barrel of these specified dimensions shall be held to be in compliance with law if it does not have a holding capacity of 7,056 cubic inches."

The SECRETARY. I second that amendment, Mr. Chairman, if that is in order.

Mr. THOMAS. Mr. Chairman, I would like to call attention to the fact that there are barrels made and used in which there is no bilge at all. The material is prepared in sheet form and bent together. It is a cylindrical barrel.

The SECRETARY. As I understand it, those gentlemen last night wanted to bar that barrel for some reason.

Mr. THOMAS. Why?

The SECRETARY. I do not know why.

Mr. THOMAS. It seems to me the important thing, Mr. Chairman, is the cubic contents of the barrel. For my part, I should be satisfied if we stopped with that. The forms of barrels, as Mr. Westcott has said, vary in different localities in our country, and methods of shipment vary. Sometimes the consideration of the possibility of shipment in proper condensed form is in large part the determining factor in the shape of the barrel. It seems to me we would go far

enough if we simply specified the net cubic contents, leaving the shape of the barrel to meet the various conditions obtaining in different parts of the country.

Mr. GOODWIN. Mr. Chairman, I wish to offer a suggestion here to avoid this trouble. It says, "*Provided further*, That a barrel within the meaning of this act shall represent a quantity of 7,056 cubic inches." Then it goes on to say, "or a quantity equal to a barrel having the following dimensions." I should cut out after the words "cubic inches" all that line up to "following" and make it read, "and having as nearly as possible the following dimensions." It seems to me that would be an easy way to avoid that trouble and still have a barrel that would meet all requirements.

Mr. HOLBROOK. Mr. Chairman, Mr. Westcott's proposal should come first.

The CHAIRMAN. I think Mr. Westcott mentioned incidentally a thing that we ought to be a little careful about. It seemed to me at first that it would answer the requirements if we should specify simply the length; and so it would, so far as the discussion before us is concerned. But that question of how the containers are packed sometimes is a rather important one. Now, in this particular case, your barrels are always stacked on end in the steamers, are they not?

Mr. WESTCOTT. Yes, sir.

The CHAIRMAN. I have noticed that on the bay steamers they are always packed in that way, and if this length is such that they could not get the three tiers between decks it would be very serious. The same is true in many other cases. The size of the package should be made to conform with the methods of shipment. Now, is this length of 26 inches too great?

The SECRETARY. Twenty-six inside, 28½ outside.

Mr. WESTCOTT. It seemed to me, in glancing over the specifications, that that was rather scant. Our Virginia law which is rather inadequate and out of date, perhaps, provides for a stave of not less than 27½ inches, 1 inch shorter than this, and provides at the same time that the distance from the bottom head to the top of the stave shall be not less than 26 inches. This objection I mentioned as to the manner of loading on the steamboats is, of course, a comparatively trivial matter. That is not one that ought to weigh very heavily against the question of national legislation. But there are other considerations that could not so easily be overcome. I think it would be impossible for the manufacturers of barrels in our section of the country to make a barrel which would comply with these dimensions out of the material which we use, because the bilge is greater by comparison with the other dimensions of the barrel than we could get with a pine stave. The wood has not sufficient elasticity to bend that much, and it would be necessary

for them to make rather a straighter barrel, and therefore to depart from these exact dimensions.

The CHAIRMAN. The whole thing is settled by fixing the limits on the height; there is no question about that. All you have to do is to say that the height shall not be more or less than a certain amount and the other matters will have to be adjusted accordingly. We find ourselves in the same condition that we did in regard to the electrical standards. The Chicago convention defined the value of the three things which entered into Ohm's law. We want to avoid that. Will someone make a definite amendment now, in view of what has been said?

Mr. HASKELL. Mr. Chairman, I move that this portion of section 1 be amended to read as follows: "*Provided further*, That a barrel within the meaning of this act shall represent a quantity of not less than 7,056 cubic inches;" then cut out the next three lines—"the distance between heads to be not less than 26 inches, and to be known as a standard barrel."

The motion was seconded.

The SECRETARY. The only thing I see in favor of the other, Mr. Chairman, is that it is a sort of indication to the barrel maker as to what he shall do; and I rather favor Mr. Goodwin's amendment—"and having as nearly as possible the following dimensions"—because otherwise, if we do not look out, we will have all sorts of freak barrels that might have the required dimensions and yet not have the proper capacity.

The CHAIRMAN. In order to bring it before the convention, we have Mr. Haskell's motion and the second. Are there any remarks?

Mr. HASKELL. Mr. Chairman, what difference does it make whether a barrel has 2 inches bilge or whether it is a straight barrel; whether it is 19 inches across the head or 22 inches across the head, if it holds not less than the number of cubic inches here stated?

The SECRETARY. It makes a good deal of difference to the shippers.

Mr. HASKELL. That will accommodate this shipper. Now, then, if some other shipper wants to use a barrel of other dimensions, let him do so, but it must not hold less than 7,056 cubic inches. If a man has a style of barrel that he wants to advertise, or anything of that kind, it seems to me that the whole thing is covered by merely stating that the cubical contents shall be not less than 7,056 cubic inches, and that the height of the barrel shall not be less than 26 inches inside measurement.

The SECRETARY. That, of course, is a great deal better than not specifying any dimensions. But I met with this committee last night—got the views of these commission merchants. They seemed to think it was highly desirable that the dimensions of the barrel be standardized to a great extent. They want barrels of about

the same shape. It is not sufficient to say that a gallon shall contain 231 cubic inches. Every weights and measures man knows that that is not enough, especially in dry commodities. It is all right in liquid commodities, but the minute you deal with dry commodities you ought to specify not only the number of cubic inches but also the dimensions; because you can get vessels with the same cubical contents that have entirely different capacities, so far as measuring commodities like potatoes, etc., are concerned. Of course, I can conceive that this, too, might be carried to some ridiculous extreme; for instance, they might make a barrel quite squat, if you do not specify the height.

Mr. GOODWIN. Mr. Chairman, I do not want to take up time unnecessarily, but I feel it my duty to say just another word. There are three different interests directly involved in this matter—the shipper, the carrier, and the dealer. Now, I think that the interests of all should be considered. Therefore, I made that amendment to this section, so as to give as nearly a uniform barrel as possible, and it seems to me that it covers the whole thing. You have the cubical contents and you have a barrel that is as nearly as possible of a certain size. It does not confine a man to an inch or two, but keeps the size within a reasonable limit.

The CHAIRMAN. In order to get the sense of the meeting, let us put the motion.

Mr. HASKELL. Mr. Chairman, if I may have just a moment, I would like to illustrate this condition. In the District of Columbia Congress passed a law defining the sizes of dry measures and providing that two measures could be attached, a peck and a half-peck. The half-peck would be on the bottom of the peck, and naturally, owing to the shape of it, the top of the half-peck measure would be two inches less in diameter than the bottom. Consequently the hucksters (and they are pretty shrewd) could stack in those peck measures and half-peck measures in such a way as to reduce the quantity very materially. Now, the question came up whether we could inspect and pass a measure that was round and had straight sides, which, of course, was a better measure for the consumer; and after taking the advice of the corporation counsel we passed measures of that kind. We did so because we took the ground that the parties interested were better served with a straight round measure than they were with a conical shaped measure with the top narrower than the bottom.

The CHAIRMAN. Is it your idea that this should be a straight barrel?

Mr. HASKELL. Not particularly. In my judgment it does not make any particular difference whether it has 2 inches of bilge, 4 inches of bilge, or is practically straight if you get the cubical contents. Of

course you might possibly go to extremes, but I do not see any reason to give that a thought, because the people interested are not going to send to market a barrel that is going to be objectionable. In other words, they will not send a barrel to their customers in the several markets that would be in any way objectionable.

The CHAIRMAN. Don't you think that either of the plans proposed would result in an unobjectionable barrel?

Mr. HASKELL. I think so.

The CHAIRMAN. And it is a question for us to decide which one to take.

Mr. BOYER. I have a substitute to offer by request, if you will listen to it. Leaving the provision as it is now, insert after the words "not less than 26 inches: *Provided*, That no barrel of the dimensions specified shall be held to comply with the law if it have a capacity of less than 7,056 cubic inches."

The CHAIRMAN. In other words, you have just reversed it?

Mr. BOYER. Yes.

The CHAIRMAN. Now, we have a choice of three plans. Is there a second to this amendment? [Cries of "Question!"]

The question before us is Mr. Haskell's amendment, which, as I understand it, specifies merely the cubical contents and the distance between the heads. That is one plan. If that is not thought best, vote it down.

The question was taken and the section was adopted as amended.

The SECRETARY (reading):

SECTION 2. That when commodities are sold or offered for sale in containers of other sizes than those specified in section 1 or whose sizes are not otherwise provided by statute the net quantity of the contents of each container shall be plainly and conspicuously marked, branded, or otherwise indicated on the outside or top thereof in terms of weight, measure, or numerical count: *Provided, however*, That reasonable variations shall be permitted due to the unavoidable variations in packing or filling or changes in the weight or measure of the contents due to natural causes.

On motion of Mr. Connors the section was adopted.

The SECRETARY (reading):

SECTION 3. That all other commodities not in containers shall be sold by legalized weight, legalized measure, or numerical count: *Provided, however*, That vegetables may be sold by the head or bunch: *And provided*, That poultry may be sold otherwise than by weight.

The object of that is to provide, first, for purchase and sale by carload lots. There ought not to be anything in this act that will prohibit a man from buying by the carload. The latter part, of course, needs no explanation.

On motion of Mr. Goodwin, section 3 was adopted as read.

The SECRETARY (reading):

SECTION 4. That the introduction into any State or Territory or the District of Columbia, from any other State or Territory or the District of Columbia, or from any foreign country, or shipment to any foreign country, of any container which does not conform with the requirements of this act, is hereby prohibited; and any person who shall ship or deliver for shipment from any State or Territory or the District of Columbia to any other State or Territory or the District of Columbia, or to a foreign country, or who shall receive in any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or foreign country, and having so received, shall deliver, in original unbroken container, for pay or otherwise, or offer to deliver to any other person any such container not fulfilling the requirements of this act, or any person who shall sell, or offer for sale, in the District of Columbia or the Territories of the United States any commodities in containers not of the proper size or not properly marked, or offer to export the same to any foreign country, shall be guilty of a misdemeanor, and for such offense be fined not exceeding two hundred dollars for the first offense, and upon conviction for each subsequent offense not exceeding three hundred dollars, or by imprisonment not exceeding one year, or both, in the discretion of the court: *Provided*, That no container shall be subject to the provisions of this act when intended for export to any foreign country and made or packed according to the specifications or directions of the foreign purchaser; but if commodities in such container shall be in fact sold or offered for sale for domestic use or consumption, then this provision shall not exempt said container from the operation of any of the other provisions of this act.

Mr. CONNORS. I move that the section be adopted.

The motion was seconded.

The CHAIRMAN. Are there any remarks?

Mr. GOODWIN. Mr. Chairman, I do not know whether it is a dangerous thing for us to adopt the words "from any foreign country." We can not regulate the size of a container that some foreign country may land on our shores. It seems to me that ought to be stricken from this section. We have no control over that. If they send goods here in containers different from ours, I do not know why we should refuse to receive them.

The CHAIRMAN. When we ship goods to foreign countries we can comply with their regulations; we have to do so.

The SECRETARY. Mr. Chairman, that is a provision that is in the pure-food law. It was put there for the purpose of preventing the foreign manufacturer from shipping anything into this country that was adulterated. Now, whether it is applicable to this, or not, is a question raised in my mind.

The CHAIRMAN. I know that in the discussion of these matters before various committees at the Capitol this question of branding goods to be sold in this country has always come up in respect to foreign countries, and everyone has agreed to the fact that goods intended for foreign countries must comply with the regulations

of the country to which they are shipped. It seems to me that is perfectly obvious.

Mr. GOODWIN. Has this thing been submitted to any legislative body?

The SECRETARY. This provision that we are dealing with now has been. It is part of the pure-food law at the present time, but it applies, of course, to adulterations. Now, whether we have a right to say that we shall not receive from a foreign country anything that is not in the right-sized package, of course, might be a question. We undoubtedly have a right to say that they shall not sell us adulterated materials.

The CHAIRMAN. We have a perfect right to say whether it is wise to do it or not.

Mr. GOODWIN. It looks to me as if it was radical legislation.

The SECRETARY. On the other hand, Mr. Chairman, these people concerned with this measure do a large business with Canada. Are we going to require our own dealers to give us full-sized barrels and permit the Canadians to send us short barrels?

Mr. HASKELL. Suppose we do? The man who bought the barrel could not sell it here unless it was a standard barrel.

The SECRETARY. No; but if we had such a law they would be compelled to adopt for export trade a standard barrel.

Mr. HASKELL. But, Mr. Fischer, if the Canadian shipper should send into this country a different sized barrel from the standard barrel, the party that he sold it to in this country, before he could dispose of the contents, would have to put them into a standard barrel.

The SECRETARY. I think, perhaps, that might be left out, and still he would be required to use a standard-sized barrel, and that eventually, of course, would result in the people doing business between this country and Canada having standard-sized barrels.

On motion of Mr. Goodwin, the word "foreign" was stricken from section 4 wherever it appeared, and the section adopted as amended.

The SECRETARY (reading):

SECTION 5. That any person who violates any of the provisions of this section shall be guilty of a misdemeanor, and for each offense shall, upon conviction thereof, be fined not to exceed two hundred dollars, or shall be sentenced to one year's imprisonment, or both, such fine and imprisonment, in the discretion of the court, and for each subsequent offense and conviction thereof, shall be fined not less than five hundred dollars or sentenced to one year's imprisonment, in the discretion of the court.

These penalties, also, were prescribed for violations of the pure food law, and whether or not they are excessive for this kind of a violation of law I do not know.

On motion of Mr. Johnson the section was adopted.

The SECRETARY (reading):

SECTION 6. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor shall establish reasonable tolerances from time to time to allow for unavoidable variations in manufacturing and filling such containers, and for changes in the weight or measure of the contents due to natural causes; and also shall make uniform rules and regulations for carrying out the provisions of this act, including the collection and examination of containers put up or offered for sale in the District of Columbia or in any Territory of the United States, or which may be submitted for test by the chief weights and measures officer of any State, Territory, or the District of Columbia.

The SECRETARY. That section appears to be very much confused, and I must confess I do not see how we can straighten it out now. What it is intended to do is to give the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor authority to establish tolerances, etc.

Mr. CHAIRMAN. I move that that section be adopted subject to revision. I can not get that straightened out just now; but if we can pass a resolution so that the sense of it will be adopted we can put it in shape afterwards. That is all I had expected to do here to-day, so far as these last eight sections are concerned. All of these sections beyond the first three merely have to do with carrying out the act.

Mr. CONNORS. Mr. Chairman, I second the motion that the section be adopted subject to revision by the secretary.

The CHAIRMAN. As I understand it, the whole object is to refer the question of tolerances to this committee composed of the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor.

The SECRETARY. That is right.

The motion was seconded and carried.

The SECRETARY. There is not one chance in a thousand, Mr. Goodwin, that we would ever get that straight in a discussion of this kind. [Cries of "Question!"]

The CHAIRMAN. A motion is before us to adopt this section, subject to revision, providing that it shall contain the principle that the fixing of tolerances shall be referred to the usual committee.

The question was taken and the section was adopted.

The SECRETARY (reading):

SECTION 7. That the examination of the size, net weight, measure, or numerical count of such containers shall be made by the Bureau of Standards of the Department of Commerce and Labor, or under the direction and supervision of such bureau, for the purpose of determining from such examination whether such container is of the proper dimensions and correctly marked; and if it shall appear from such examination that any of such containers are not of the proper dimensions or are inadequately or not correctly marked within the meaning of this act, the Secretary of Commerce and Labor shall cause notice thereof to be given to the person from whom such container was obtained. Any person so notified shall be given an opportunity to be heard, under such

rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this act have been violated by such person, then the Secretary of Commerce and Labor shall at once certify the facts to the proper United States district attorney, with a copy of the results of the examination of such containers duly authenticated by the officer making such examination, under the oath of such officer. After judgment of the court notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid.

Mr. HOLBROOK. Mr. Chairman, I move the adoption of the section, subject to such corrections in phraseology as seem desirable.

The motion was seconded and the section was adopted.

The SECRETARY (reading):

SECTION 8. That it shall be the duty of each district attorney to whom the Secretary of Commerce and Labor shall report any violations of this act, or to whom any sealer of weights and measures or officer of any State, Territory, or the District of Columbia shall present satisfactory evidence of any such violation, to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States, without delay, for the enforcement of the penalties as in such case herein provided.

On motion of Mr. McIntyre, the section was adopted.

The SECRETARY (reading):

SECTION 9. That the term "container" as used in this act shall include any barrel, basket, box, bag, crate, or other container used in shipping vegetables, produce, or fruit.

On motion of Mr. Goodwin the section was adopted.

Mr. CONNORS. Would it not be a good idea to insert "carton"?

The SECRETARY. I cut that out purposely, because it is only intended to cover containers used in shipping vegetables, produce, or fruit. It is more of a barrel and a basket bill than anything else. Those are the two things most urgent at the present time—the establishment of a uniform barrel and uniform basket for shipping berries and commodities of that sort. [Reading:]

SECTION 10. That the term "Territory," as used in this act, shall include the insular possessions of the United States. The word "person," as used in this act, shall be construed to include both the plural and the singular, as the case demands, and shall include corporations, companies, societies, and associations. When construing and enforcing the provisions of this act, the act, omission, or failure of any officer, agent, or other person acting for or employed by any corporation, company, society, or association, within the scope of his employment or office, shall in every case be also deemed to be the act, omission, or failure of such corporation, company, society, or association, as well as that of the person.

On motion of Mr. Goodwin section 10 was adopted.

The SECRETARY (reading):

SECTION 11. That this act shall be in force and effect from and after the first day of ____.

I move that section 11 be adopted with the date left blank. The motion was seconded, and the section was adopted.

The CHAIRMAN. I presume a motion is in order now to adopt the bill as a whole.

Mr. CONNORS. I move, Mr. Chairman, that this bill be adopted as a whole.

The motion was seconded, and the bill was adopted.

The CHAIRMAN. This, so far as I know, finishes the regular order of business.

The SECRETARY. With the exception, Mr. Chairman, of the discussion of a city ordinance, and I move that that be dispensed with. I feel as though I had about enough myself; I do not know how the rest of you gentlemen feel about it.

Mr. GOODWIN. I move that it be referred to the executive committee, to be taken up at the next meeting.

The motion was seconded.

The CHAIRMAN. It is moved and seconded that the matter be referred to the executive committee with instructions to present a model ordinance at the next meeting. Are there any remarks?

The question was taken, and the motion was carried.

The CHAIRMAN. Is there anything further to come before the convention?

Mr. MCINTYRE. Mr. Chairman, in view of the kindness of the bureau and the efforts made to foster this conference and assist it, I move that a vote of thanks be returned to the Bureau of Standards for its assistance and the kindness that it has shown toward the conference of State sealers of weights and measures.

Mr. GOODWIN. I second the motion.

Mr. HASKELL. Mr. Chairman, I wish to say but a very few words; but I do want to impress, if I can, upon this conference the importance of having the assistance of the Bureau of Standards. I speak of this because I personally know of the influence that they have with the committees of Congress, the close connection there is between the bureau and the Committee on Coinage, Weights, and Measures of Congress, and I am heartily in favor of this. I would like to go further and express it in more emphatic words than even the resolution that has been offered, for we who are here on the ground realize and know how much time it takes to go before a committee and accomplish any results, and the patience, the energy, and the activity displayed by our president and our secretary ought to be very highly appreciated by this conference.

Mr. GOODWIN. Mr. Chairman and gentlemen, I wish to indorse the sentiment of my friend from the District of Columbia. I think the way we have been treated here is conducive to the best interests of the business in which we are engaged. It has been my pleasure to be here on two occasions, and I have certainly profited very much by the information received from the bureau and the representative sealers that I met. Our presiding officer I am satisfied,

is very much interested in this work, and always ready to assist us in every possible way. He has offered, and the secretary of the executive committee has offered, a reasonable explanation of why we did not get our reports, etc., and I am satisfied with their explanations. I hope the present year will bring our reports earlier, but if it does not we will have to get along without them. I want to thank the president of this association for the kind treatment I have received at his hands and the information I have obtained here, and I hope and trust that every delegate here to-day will go home with a feeling that Dr. Stratton is his friend and an adviser who is always ready to assist him and encourage him in this sealing work.

The question was taken and the motion was carried.

Mr. MCINTYRE. Mr. Chairman, in view of the faithful and diligent effort of our stenographer, I move that the conference extend a vote of thanks to Mr. Caswell.

The motion was seconded and carried.

Mr. JANSSEN. Just a word with reference to the time of getting out the document. I have been accustomed to receiving Government reports, for instance, the reports from the Commissioner of Education, and usually we have been very well satisfied if we could get the report a year and a half, and sometimes two years, from the time the data were supposed to be gathered. Of late years we have been able to get them a little earlier; but it is certainly not possible, with all of the Government printing and all the demands, to get reports out in so short a time as some might expect. I think, therefore, that we should bear these conditions in mind and have patience in waiting for the report.

The SECRETARY. There is one question that I think should be decided in connection with this report. It seems to me proper that we expurgate from our record everything that is not pertinent, and I would like to receive instructions from the conference as to whether they want irrelevant remarks retained in the record. It seems to me that we might leave most of them out, but I would like to be instructed before doing so in the future.

Mr. THOMAS. I asked Dr. Stratton at the luncheon hour that my remarks made this morning be omitted.

Mr. GOODWIN. Mr. Chairman, I move that the secretary be instructed to cut out whatever he thinks is objectionable and should not be contained in the record.

The motion was seconded and carried.

The CHAIRMAN. In regard to this report, it did not occur to us that that of itself would be of any great value in the advancement of the work throughout the country, especially as this report last year was almost entirely in the nature of experiences. I can assure you that we are always ready to be criticized, although we like to have it

done in a friendly way; and if it is your wish, we will do all in our power to accelerate the publishing of that report.

Mr. GOODWIN. Mr. Chairman, I would like to ask if it would be possible within, say three weeks, to get this thing in any form. There are some things that are now being acted on in my legislature pertaining to this business that was transacted here to-day, and I would like to have the proceedings before me so that I can talk on these matters.

The CHAIRMAN. I think that most of them are covered in the drafts of the bills which we have passed.

Mr. GOODWIN. While I am on my feet, I wish to say that I have a few reports of the sealing laws in my State, and I would like to have the delegates that have no State laws regarding the matter look them over.

The SECRETARY. Mr. Chairman, I move that we adjourn.

The motion was seconded.

Mr. HASKELL. Subject to the call of the President?

The SECRETARY. I think that matter has been referred to the executive committee, has it not?

The CHAIRMAN. Yes; it was referred to the executive committee.

Before putting this motion I want to thank the members of the convention for the patience that they have displayed and the earnestness with which they have entered into these discussions. It is going to prove of very great assistance to us in advising people, and in considering ourselves these questions with which, perhaps, we do not come in as direct contact as you do. I have been very much gratified this afternoon at the progress we have made and the definite way in which the various points have been taken up and considered. I sincerely hope that at the next meeting we will not only have this sort of discussion; that is, discussion confined to definite points of value, but that we can follow up the suggestions made yesterday. I have from the very beginning hoped that we could take up in this meeting from time to time definite questions pertaining to apparatus, standards, practices, and so forth—technical questions in which we are all interested; and if I have anything to do with the program for the next year some of these subjects are going to be included. I hope that the executive committee will come with a definite program of papers; that this program will be sent out some time in advance, and that the members will come with prepared papers on definite subjects. It seems to me the sooner we get to that the better off we will be.

I thank you again, gentlemen, for your kindness, and I am sure the members of the bureau all join with me in expressing this sentiment.

The motion to adjourn was carried, and at 3.45 p. m. the conference adjourned.

APPENDIX.

MODEL UNIFORM REGULATIONS FOR STATE LEGISLATION ON THE SUBJECT OF WEIGHTS AND MEASURES, DRAFTED BY THE NATIONAL BUREAU OF STANDARDS AND INDORSED BY THE SIXTH NATIONAL CONFERENCE ON WEIGHTS AND MEASURES.¹

SECTION 1. The weights and measures received from the United States under a resolution of Congress approved June 14, 1836, and such new weights and measures as shall be received from the United States as standard weights and measures in addition thereto or in renewal thereof, and such as shall be supplied by the State in conformity therewith and certified by the National Bureau of Standards shall be the State standards, by which all county and municipal standards of weights and measures shall be tried, proved, and sealed.

SEC. 2. There shall be a State superintendent of weights and measures, who shall be appointed by the governor, by and with the advice and consent of the senate. Such superintendent shall be appointed for a term of five (four) years, and shall receive a salary of \$—— a year. There shall be a deputy superintendent of weights and measures and inspectors of weights and measures, the deputy to be appointed by the superintendent of weights and measures and to hold office during the superintendent's term of office, the inspectors to be appointed from an eligible list prepared by the civil service board and under the rules of said board. The superintendent of weights and measures shall be allowed for salaries for the deputy superintendent of weights and measures, inspectors of weights and measures, clerical services, traveling and contingent expenses for himself, his deputy, and inspectors such sums as shall be appropriated by the legislature.

SEC. 3. The superintendent of weights and measures shall take charge of the standards adopted by this article as the standards of the State, and cause them to be kept in a fireproof building belonging to the State (or in a safe and suitable place in the office

¹ The aim of the conference is to have efficient laws governing weights and measures in every State and Territory, and, so far as is practicable, to have these laws uniform. It is not expected, however, that the laws shall be uniform in all minor details; the titles used, terms of office specified, bonds required, etc., in the model regulations are only suggestive, and where not in conformity with the general practices of a particular State or Territory should be changed.

of the superintendent), from which they shall not be removed except for repairs or for certification, and he shall take all other necessary precautions for their safe keeping. He shall maintain the State standards in good order and shall submit them at least once in 10 years to the National Bureau of Standards for certification. He shall at least once in two (five) years try and prove by the State standards all standard weights, measures, and other apparatus which may belong to any county or city, and shall seal such when found to be accurate by stamping on them the letter "—" and the last two figures of the year with seals which he shall have and keep for that purpose. He shall have and keep a general supervision of the weights, measures, and weighing and measuring devices offered for sale, sold, or in use in the State. He shall, upon the written request of any citizen, firm, corporation, or educational institution in the State, test or calibrate weights, measures, weighing or measuring devices, and instruments or apparatus used as standards in the State. He, or his deputy, or inspectors, by his direction, shall at least once annually test all scales, weights, and measures used in checking the receipts or disbursements of supplies in every institution for the maintenance of which moneys are appropriated by the legislature, and he shall report in writing his findings to the supervisory board and to the executive officer of the institution concerned, and, at the request of such board, or executive officer, the superintendent of weights and measures shall appoint in writing one or more employees then in the actual service of each institution who shall act as special deputies for the purpose of checking the receipts or disbursements of supplies. He shall keep a complete record of the standards, balances, and other apparatus belonging to the State and take a receipt for same from his successor in office. He shall annually, on the 1st day of ———, make to the governor a report of the work done by his office. The State superintendent, or his deputy, or inspectors, at his direction, shall inspect all standards and apparatus used by the counties and cities at least once in two years, and shall keep a record of the same. He, or his deputy, or inspectors, at his direction, shall at least once in two years visit the various cities and counties of the State in order to inspect the work of the local sealers, and in the performance of such duties he may inspect the weights, measures, balances, or any other weighing or measuring appliances of any citizen, firm, or corporation, and shall have the same powers as the local sealer of weights and measures. The superintendent shall issue from time to time regulations for the guidance of county and city sealers, and the said regulations shall govern the procedure to be followed by the aforesaid officers in the discharge of their duties. The State superin-

tendent of weights and measures shall forthwith, on his appointment, give a bond in the penal sum of \$5,000, with sureties, to be approved by the governor for the faithful performance of the duties of his office and for the safety of the standards intrusted to his care and for the surrender thereof immediately to his successor in office or to the person appointed by the governor to receive them. The deputy superintendent of weights and measures and each inspector of weights and measures shall forthwith upon his appointment give a bond in the penal sum of \$1,000, with sureties, to be approved by the secretary of state (or attorney general), for the faithful performance of the duties of his office and for the surety of any apparatus intrusted to his care.

SEC. 4. The board of county commissioners of each county and the common council of each city required to appoint a sealer under this act shall procure at the expense of the county or city, and shall keep at all times a complete set of weights and measures and other apparatus of such materials and construction as the said superintendent of weights and measures may direct. All such weights, measures, and other apparatus having been tried and accurately proven by him shall be sealed and certified to by the State superintendent as hereinbefore provided, and shall be then deposited with and preserved by the county or city sealer as public standards for each county or city.

Whenever the board of county commissioners of a county or the common council of such city shall neglect for six months so to do, the county auditor of the county, or the city clerk or comptroller of said city, on notification and request by the superintendent of weights and measures, shall provide such standards and cause the same to be tried, sealed, and deposited at the expense of the county or city.

SEC. 5. There shall be a county sealer of weights and measures in each county, who shall be appointed by the board of county commissioners for a term of five years. He shall be paid a salary determined by such board, said salary not to be less than \$1,000 a year, and no fee shall be charged by him or by the county for the inspection, testing, or sealing of weights, measures, or weighing or measuring devices. When not otherwise provided by law the county sealer shall have the power within his county to inspect, test, try, and ascertain if they are correct all weights, scales, beams, measures of every kind, instruments or mechanical devices for measuring, and tools, appliances, or accessories connected with any and all such instruments or measures kept, offered, or exposed for sale, sold, or used or employed within the county by any proprietor, agent, lessee, or employee in proving the size, quantity, extent, area, or measurements of quantities, things, produce, articles for distribution or con-

sumption offered or submitted by such person or persons for sale, hire, or award; and he shall have the power to and shall from time to time weigh or measure packages or amounts of commodities of whatsoever kind kept for the purpose of sale, offered for sale, or sold or in the process of delivering, in order to determine whether the same contains the amounts represented, and whether they be offered for sale or sold in a manner in accordance with law. He shall at least twice each year and as much oftener as he may deem necessary see that the weights, measures, and all apparatus used in the county are correct. He may for the purpose above mentioned, and in the general performance of his official duties, enter and go into or upon, and without formal warrant, any stand, place, building, or premises, or stop any vendor, peddler, junk dealer, coal wagon, ice wagon, delivery wagon, or any dealer whatsoever, and require him, if necessary, to proceed to some place which the sealer may specify, for the purpose of making the proper tests. Whenever the county sealer finds a violation of the statutes relating to weights and measures, he shall cause the violator to be prosecuted. Whenever the sealer compares weights, measures, or weighing or measuring instruments and finds that they correspond or causes them to correspond with the standards in his possession, he shall seal or mark such weights, measures, or weighing or measuring instruments with appropriate devices to be approved by the State superintendent of weights and measures. He shall condemn and seize and may destroy incorrect weights, measures, or weighing or measuring instruments which, in his best judgment, are not susceptible of satisfactory repair; but such as are incorrect and yet may be repaired, he shall mark or tag as "Condemned for repairs" in a manner prescribed by the State superintendent of weights and measures. The owner or users of any weights, measures, or weighing or measuring instruments of which such disposition is made, shall have the same repaired or corrected within 10 days, and they may neither use nor dispose of the same in any way, but shall hold the same at the disposal of the sealer. Any apparatus which has been "condemned for repairs," and has not been repaired as required above, shall be confiscated by the sealer.

The county sealer shall keep a complete record of all of his official acts, and shall make an annual report to the board of county commissioners and an annual report, duly sworn to, on the 1st day of ———, to the State superintendent of weights and measures, on blanks to be furnished by the superintendent. The county sealer of weights and measures shall forthwith, on his appointment, give a bond in the penal sum of \$1,000, with sureties, to be approved by the appointing power, for the faithful performance of the duties of his office.

Provided, however, That nothing in the above shall be construed to prevent two or more counties from combining the whole or any part of their districts, as may be agreed upon by the boards of county commissioners, with one set of standards and one sealer, upon the written consent of the State superintendent of weights and measures. A county sealer appointed in pursuance of an agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

SEC. 6. There shall be a city sealer of weights and measures in cities of not less than 25,000 population, according to the latest official State or United States census, to be appointed by the mayor from a list to be furnished by the civil service board and under the rules of such board where such board exists; otherwise he shall be appointed by the mayor, by and with the advice and consent of the county council. He shall perform in said city the duties and have like powers as the county sealer in the county. In those cities in which no sealer is required by the above the county sealer of the county shall perform in said cities the duties and have like powers as in the counties.

Provided, however, That nothing in the above shall be construed to prevent any county and the city situated therein from combining the whole or any part of their districts, as may be agreed upon, with one sealer, subject to the written approval of the State superintendent of weights and measures. A sealer appointed in pursuance of any agreement for such combination shall, subject to the terms of his appointment, have the same authority, jurisdiction, and duties as if he had been appointed by each of the authorities who are parties to the agreement.

SEC. 7. Any person who, by himself or by his servant or agent, or as the servant or agent of another, shall offer or expose for sale, sell, or use or retain in his possession a false weight or measure or weighing or measuring device, or any weight or measure or weighing or measuring device which has not been sealed by the sealer of weights and measures within one year, in the buying or selling of any commodity or thing, or for hire or award; or shall dispose of any condemned weight, measure, or weighing or measuring device contrary to law, or remove any tag placed thereon by a sealer of weights and measures; or any person who, by himself or by his servant or agent, or as the servant or agent of another, shall sell or offer or expose for sale less than the quantity he represents, or sell or offer or expose for sale any such commodity in a manner contrary to law (or any person who, by himself or by his servant or agent, or as the servant or agent of another, shall sell or offer for

sale or have in his possession for the purpose of selling any device or instrument to be used to or calculated to falsify any weight or measure), shall be guilty of a misdemeanor, and shall be punished by a fine of not less than \$20 or more than \$200, or by imprisonment for not more than three months, or by both such fine and imprisonment, upon a first conviction; but upon a second or subsequent conviction he shall be punished by a fine of not less than \$40 or more than \$500, or by imprisonment in the county jail for not more than one year, or by both such fine and imprisonment.

Sec. 8. The superintendent of weights and measures, his deputy and inspectors, and the county and city sealers of weights and measures, are hereby made special policemen, and are authorized and empowered to arrest, without formal warrant, any violator of the statutes in relation to weights and measures, and to seize for use as evidence, and without formal warrant, any false or unsealed weight, measure, or weighing or measuring device or package or amounts of commodities found to be used, retained, or offered or exposed for sale or sold in violation of law.

Sec. 9. Any person who shall hinder or obstruct in any way the superintendent of weights and measures, his deputy, or inspectors, or any county or city sealer, in the performance of his official duties shall be guilty of a misdemeanor, and shall be punished upon conviction thereof in any court of competent jurisdiction by a fine of not less than \$2 or more than \$900, or by imprisonment in the county jail for not more than 90 days, or by both such fine and imprisonment.

Sec. 10. Any person who shall impersonate in any way the superintendent of weights and measures, his deputy, or inspectors, or any county or city sealer, by use of his seal or counterfeit of his seal, or otherwise, shall be guilty of a misdemeanor, and shall be punished by a fine of not less than \$100 nor more than \$500, or by imprisonment for not more than one year, or by both such fine and imprisonment.

It shall be unlawful to sell or offer to sell in the State any coal or charcoal in any other manner than by weight, except by written agreement to the contrary. No person, firm, or corporation shall deliver any coal or charcoal without each such delivery being accompanied by delivery ticket and a duplicate thereof, on each of which shall be in ink or other indelible substance, distinctly expressed in pounds, the gross weight of the load, the tare of the delivery vehicle, and the quantity or quantities of coal or charcoal contained in the cart, wagon, or other vehicle used in such deliveries, with the name of the purchaser thereof, and the name of the dealer from whom purchased. One of these tickets shall be surrendered to the sealer of weights and measures upon his demand for his inspection, and this ticket or weight slip issued by the sealer when the sealer desires to retain the original shall be delivered to the said purchaser

of said coal or charcoal or his agent or representative at the time of the delivery of the fuel; and the other ticket shall be retained by the seller of the fuel. When the buyer carries away the purchase, a delivery ticket showing the actual number of pounds delivered over to the purchaser must be given to the purchaser at the time the sale is made.

All bread baked and kept for the purpose of sale, offered or exposed for sale, or sold in the State, shall be sold by weight. To each loaf of bread shall be attached a label or stamp plainly showing its weight and the firm name of the manufacturer thereof, the size of stamp and type used to be specified by the State superintendent of weights and measures. It shall be unlawful for any person to make for sale, sell, offer to sell, or procure to be sold any bread other than such as shall be in accordance with the provisions of this section.



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